CHANGE SERVICE REQUESTED

October 6, 2006 Volume 28 Number 40 www.processor.com



Get The Most Out Of Storage

Expert Tips On New Tools & Techniques

by David Garrett

SAN, NAS, ILM, CMS: Storage is overrun by acronyms. It's also complex and getting worse by the day, with the burdens of Sarbanes-Oxley, HIPAA, and evermore-frequent lawsuits that push storage systems to their limits. There are, of course, ways to cope—and ways to make the whole thing simpler. We've gathered some of the best of them below.

Archive Your Email

Email is a special storage problem. If nothing else, it "tends to be growing pretty rapidly," says Jeffrey Hausman of Symantec. "Generally, we're seeing growth in at least 25 to 30%, and often cases, more than 50%."

People simply like its speed and ease of use, attaching rich documents by the truckload and making Exchange a palimpsest of corporate affairs. According to Hausman, "A number of different analyst studies have indicated that more than 75% of your email is really kind of the center of your corporate IP."

Yet email is hard to search and harder to restore (partial restores are often nightmares). "I may have to go restore backup tapes. I may have to image laptops. I may have to pull information from file shares," says Hausman. "Often, as it's been cited publicly, the cost even just for a tape restore . . . can be as much as \$2,000 to \$4,000 per tape."

What's the answer? Don't simply back up your email; archive it. Archive tools not only make quick work of searching, but they speed up restores (inclu-

ding partial restores) and help you ensure that email complies with all privacy and retention policies. Symantec's Enterprise Vault 6.0 (www.symantec.com) is a former Veritas product and a current leader in the field; it competes with WaLa Systems' Defender (www.walasystems.com) and CA's Message Manager (formerly iLumin's Assentor; www.ca.com).

Each has a feature set that solves different storage problems. Symantec's Enterprise



Vault, for instance, migrates end users' ad hoc PST files into centralized data stores, keeping email off notebooks and PCs where it can be quickly lost.

Manage From The Information Down

Is your storage plan based on equipment or information? Do you worry about disk space or what's in your documents? Do you even know what's on your network?

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Defense In-Depth

Exercise Best Practices & A Tiered Security Defense To Protect Your Internal Network

by Will Kelly

INTERNAL NETWORK SECURITY is now mission-imperative as SMEs face an ever-changing threat landscape and business drivers such as compliance programs. Intrusions and breaches will occur, and even the best prevention measures will eventually fail,

resulting in threats on the internal network. Attack sophistication is also on the increase as organized crime gets into computer hacking.

Defense in-depth is a rising network security strategy combining best practices, policies, and a tiered network security defense. "No single technology makes an effective security strategy for any enterprise.

Defense in-depth is a rising network security strategy combining best practices, policies, and a tiered network security defense.

Accordingly, enterprises must adopt a defense in-depth strategy that combines preventive solutions (firewalls, antivirus, etc.) with response solutions (network behavioral analysis [NBA]/signature IDS) for threats missed by primary defenses," according to Steve O'Brian, vice president of product management and marketing for GraniteEdge Networks (www.granite edgenetworks.com), the maker of the GraniteEdge ESP 2.0.

Internal networks require specialized defenses because they hold the most valued corporate assets and have different architectures than perimeter. Typically, they are flat networks with no single point of control, meaning many attack vectors and threats are difficult to shut down before compromising corporate data.

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Top Tips

We interviewed industry experts, insiders, and product manufacturers to come up with our lists of top tips for data center/IT managers in several key areas. Find some practical ways to optimize storage, beef up security, simplify maintenance and upkeep, and improve mobility.

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■ Active Reasoning released the latest version of its IT controls automation software, Active Reasoning 3.3. ■ Asigra announced new features in its Televauting software. ■ Better cooling for data centers is the goal of a new partnership between Emerson Network Power and software developer Fluent. ■ IBM introduced the IBM System Storage TS7700 Virtualization Engine for more effective tape processing, replication, and disaster recovery. ■ Lantronix's WiBox device server lets administrators manage devices over a network or the Internet. ■ Sybase announced the Sybase Unwired Accelerator 8.0. software that lets users

access their enterprise applications from a mobile device. **Trend Micro** released InterCloud Security Service to identify, quarantine, and clean bot-infected PCs. **uxcomm** unveiled XManage 2.0, which unites dissimilar systems and system management applications.

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Upcoming IT Events

- OCTOBER -

Gartner Symposium/ITxpo October 8-13 Orlando, Fla.

www.gartner.com

Internet Telephony Conference & Expo West October 10-13 San Diego, Calif.

www.tmcnet.com/voip/conference

ASCDI Fall October 18-21

Toronto, Canada www.ascdi.com

Chicago ITEC 2006

October 18-19 Chicago, III. www.goitec.com

InfoSecurity

October 23-25 New York, N.Y. www.infosecurityevent.com

International Security Conference East

October 24-25 New York, N.Y. www.isceast.com

. **Data Center Decisions** October 25-26

Chicago, III. www.datacenterdecisions.com

> Kansas City ITEC 2006

October 25-26 Kansas City, Kan. www.goitec.com

- NOVEMBER -

Atlanta ITEC 2006 November 1-2 Atlanta, Ga. www.goitec.com

FS/TEC November 5-8 Long Beach, Calif. www.fstec.com

TDWI World Conference-Summer 2006

November 5-10 Orlando, Fla. www.tdwi.org

Business Rules Symposium Series November 7-8

New York, N.Y. www.brainstorm-group.com

. **Enterprise Architecture** Conference Series

November 7-8 New York, N.Y. www.brainstorm-group.com

Technology + Learning Conference

November 8-10 Dallas, Texas www.nsba.org

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MarketPlace ~ NEWS





I HP House Hearings Over

THE HOUSE OF REPRESENTATIVES'

Oversight and Investigations Subcommittee has finished its two-day hearing into the HP Board of Directors spying scandal. During the hearings, HP CEO Mark Hurd said HP's founders would "be appalled. They'd be embarrassed." Regarding the investigation techniques used, Hurd said, "I wished I had asked more questions." Former HP Chairman Patricia Dunn said she was "aware that the kinds of investigations done by [HP outside investigator Ron] Delia had previously been based solely on publicly available information" and didn't realize investigators would need to use illegal means to gather phone records. In other news, HP's outside law firm told HP as early as Aug. 30 that the use of pretexting to obtain phone records was "not generally unlawful," but that the use of Social Security numbers not provided by HP to gather phone records "more likely than not violates federal law."

Lenovo Issues Battery Recall . . .

ADD LENOVO to the list of companies that have recalled notebook batteries in the past several months. The company announced the recall of 526,000 notebook batteries last week. The lithium-ion cell of the batteries was produced by Sony, and the batteries were designed by Lenovo. Affected notebooks were produced between February of last year and last month. Although only 5 to 10% of notebooks are affected, Lenovo spokesperson Ray Gorman says all customers should visit the company Web site to see if their notebooks are part of the recall.

I . . . & Sony Announces Recall Program

SONY SAYS IT IS WORKING on a global replacement program to deal with the huge number of recalls. Sony says it has been supporting the recalls with individual notebook manufacturers but is now working with the U.S. Consumer Product Safety Commission and consulting with OEMs that use the batteries to create an overall replacement program. To date, Dell has recalled an estimated 4.2 million batteries, Toshiba recalled an estimated 830,000 batteries, Apple recalled about 1.8 million batteries, and Lenovo has recalled about 530,000 batteries. The Product Safety Commission advises against the use of incompatible batteries and chargers and urges users to ensure loose batteries do not come in contact with any metal objects.

■ More HP Employees Leave

THREE MORE HP employees have left HP as a result of the fallout from the leak probe scandal. Manager of global investigations Anthony Gentilucci and general counsel Ann O. Baskins resigned, but it was not released if Kevin Hunsaker, senior counsel and director of ethics, was terminated or had resigned. Both Gentilucci's and Hunsaker's names had come up as central figures in the leak probe scandal.

Part Of AMD/Intel Case Dropped; **Trial Date Set**

A DELAWARE U.S. district court judge dismissed the foreign element of AMD's case against Intel. In the case, AMD claims Intel used anticompetitive practices to create its dominant market share, including forcing Intel customers to not purchase AMD chips. Intel says the AMD claims were caused outside of U.S. jurisdiction, and the judge agrees, saying AMD's allegations show a foreign effect and harm with no direct or substantial reach in the United States. The case will go to trial in April 2009. AMD is proceeding with similar cases in Japan, Korea, and Europe.

■ Google Calls For More **Energy-Efficient PCs**

GOOGLE HAS ISSUED a call for industry discussion about creating more energy-efficient PCs. In a white paper presented at the Intel Developer Forum, two data center designers at Google said the industry needs to move toward a single 12-volt standard rather than the current multivoltage power supplies that today's PCs no longer need. Google representatives say the simpler design will make it easier to achieve higher overall efficiencies. According to statistics cited in the Google white paper, the new power supplies could save 40 billion kilowatt-hours of electricity over three years.

Browser Bugs On The Rise

IN THE FIRST HALF of this year, security vulnerabilities in browsers increased substantially compared to the second half of last year, Symantec reports in its Internet Security Threat Report, which it puts out twice a year. The highest number of bugs, 47, was found in Mozilla's open-source browsers, while Internet Explorer followed with 38 bugs. In the previous six-month period, Mozilla had 17 bugs, and IE had 25. Of the attacks during this period, 31% were aimed at multiple browsers. Symantec says the growth may stem from reasons such as browser bugs being easy to locate and exploit and the growing market for such vulnerabilities.

■ Dell Adding More Jobs

THE LEADING COMPUTER MAKER, Dell, plans to expand its central Texas product development operations by immediately starting the process for hiring 500 engineers. The firm already has a dynamic R&D base in the central Texas location, and Dell says the area has the potential to draw top engineers. This announcement follows Dell's recent efforts to bolster its production, design, and customer service; in the past year, Dell hired more than 2,000 support and sales employees in the United States, 1,000 of whom were hired in Nashville. It also hired more than 500 workers for its manufacturing plant in Winston-Salem, N.C., and has laid out plans for opening new facilities in India and Poland.

■ U.S. Embassy "Lobbied" For Microsoft

COMPETITION COMMISSIONER Neelie Kroes says the U.S. Embassy asked her to

be "nicer" to Microsoft prior to her deciding to fine the company \$357 million in July for failing to comply with the European Commission's 2004 antitrust ruling. The U.S. Embassy in question, located in Brussels, Belgium, has not responded to the allegations. And while Microsoft did not officially offer comments on Kroes' assertion, an insider says the firm has not taken part in any lobbying or discussion between the EC and the U.S. government regarding the software giant's antitrust case. About the alleged lobbying, Kroes told a Dutch newspaper, "This is of course an intervention which is not possible."

IBM Seeks SCO Lawsuit Dismissal

IN A MOVE TO END the long-standing lawsuit between SCO and IBM, IBM asked a U.S. district court judge to dismiss what is left of the \$1 billion suit because of a lack of evidence. Meanwhile, SCO filed papers to have the judge rule on the merits of certain aspects of the lawsuit before it goes to trial. SCO originally brought the suit against IBM in March 2003 because it said IBM had inserted SCO's Unix code into Linux and supplied the operating system to developers. In June a federal magistrate judge dismissed a significant portion about two-thirds—of SCO's claims because they were not specific enough to be held up in court.

■ Tech Industry Adds Jobs

DURING THE FIRST HALF of this year the U.S. technology industry added more than 140,000 jobs, according to a study conducted by the American Electronics Association. The increase is nearly double what the industry saw in the first half of last year, when 78,900 tech jobs were added. Josh James, one of the report's authors, says the increase is the largest the industry has seen in a six-month period since 2001. The study also indicated that the high-tech services sectors saw a net increase of 107,000 jobs.

Cingular Sues HP Investigator

CINGULAR WIRELESS filed a federal lawsuit in the Northern District of Georgia against Charles Kelly and the CAS Agency, which Cingular believes improperly obtained customer phone records. Cingular says the agency did not "have authorization from Cingular, from its customers, or from validly issued subpoenas or court orders to access Cingular's confidential customer information." The suit seeks unspecified damages and an injunction prohibiting the defendants from ever contacting Cingular.

WATCH THE

This information provides a quick glimpse of current and historical stock prices and trends for 16 major companies in the technology market.

Company	Symbol	Year Ago	Sept. 25	Oct. 2	% change from previous week
Avaya	AV	\$10.07	\$11.45	\$11.43	▼ 0.17%
BEA Systems	BEAS	\$8.39	\$15.80	\$14.90	▼ 5.7%
Computer Associates	CA	\$27.38	\$23.45	\$23.70	▲ 1.07%
Cisco Systems	CSCO	\$17.92	\$23.23	\$22.98	▼ 1.08%
Dell	DELL	\$33.94	\$22.16	\$23.04	▲ 3.97%
Electronic Data Systems	EDS	\$22.14	\$24.34	\$24.50	▲ 0.66%
Google	GOOG	\$306	\$403.98	\$401.44	▼ 0.63%
HP	HPQ	\$28.52	\$35.71	\$37.66	▲ 5.46%
IBM	IBM	\$79.50	\$82	\$81.87	▼ 0.16%
Intel	INTC	\$23.95	\$19.41	\$20.44	▲ 5.31%
McAfee	MFE	\$30.74	\$23.93	\$24.46	▲ 2.21%
Microsoft	MSFT	\$25.67	\$26.95	\$27.36	▲ 1.52%
Oracle	ORCL	\$12.20	\$17.97	\$17.66	▼ 1.73%
Red Hat Software	RHAT	\$16.52	\$26.07	\$20.59	▼ 21.02%
Sun Microsystems	SUNW	\$3.88	\$5.13	\$5	▼ 2.53%
Symantec	SYMC	\$21.47	\$20.97	\$20.72	▼ 1.19%

NOTE: This information is meant for reference only and should not be used as a basis for buy/sell decisions

MARKET WATCH

Used & Refurbished Equipment Dealers

It Doesn't Have To Be New To Be Quality

by Sixto Ortiz Jr.

THE AFTERMATH of the dot-com crash from a few years ago yielded a benefit for those IT administrators savvy enough to catch on: a marketplace glut of used IT hardware.

These were the remains of companies that sported trendy business models but little else in the way of business fundamentals such as profits or even income.

So, many IT administrators realized the value of used or refurbished equipment that works just as well but sells at a discount. Read on to learn more and start on your path to hardware savings.

Used, Refurbished . . . & Inexpensive

So what if a router is not the very latest model? Unless there is a compelling feature that is absolutely essential to your business, going with a used machine that is one or two years removed from new model status may save you some big dollars.

And just because it's not new doesn't mean it's lacking a good warranty. Many resellers of used and refurbished IT hardware include warranties with the equipment they sell. And many manufacturers, such as Cisco, have their own refurbished equipment programs to move older equipment. For example, Cisco's Authorized Refurbished Equipment program (www.cisco.com) includes full warranty protection for Cisco gear.

Other hardware manufacturers who sell their own refurbished gear include HP, Dell, Sun, and Nortel. And what about eBay? The venerable auction Web site and dot-com icon is an excellent place to locate IT gear, as well. But it's important to remember the site is but an intermediary that connects buyers and sellers, so at the end of the day, it's buyer beware.

CompuVest

Washington-based CompuVest not only sells new manufacturer products, it also purchases manufacturer overstock, excess, and slightly obsolete inventories in large quantities. CompVest sells a tremendous variety of gear, from end-user products such as notebooks, hard drives, and PDAs to networking gear such as switches, bridges, and routers.

Manufacturers represented include Cisco, Nortel, 3Com, Dell, IBM, and Compaq. Click the Clearance link on CompuVest's

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CompuVest

A one-stop shop to satisfy all users, from data center administrators to end users

www.Processor.com/CompuVest

Web site for pricing on deeply discounted gear. If the product you're looking for isn't there, click "Product Request" to find a product not listed on the Web site or to request a quantity quote or bulk volume discount.

Network Liquidators

Network Liquidators, aka NWLQ, is a reseller specializing in new sealed, new open box, used, and refurbished network gear. All of the major networking gear

manufacturers are represented, including Cisco, Compaq, Extreme, F5 Networks, Foundry, Nortel, and Juniper.

Equipment categories sold include cables, routers, switches, firewalls, Gigabit Interface Converters, memory, and central office equipment. If you're worried about buying used gear, fear not: According to NWLQ, all equipment purchased by the company is inspected and tested by on-staff Cisco- or Extreme Networks-certified engineers.

Testing conducted includes physical inspections, inspection of serial numbers

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Network Liquidators

A network gear specialist covering all the bases, including Cisco, Foundry, Juniper, and others

www.Processor.com/NetworkLiquidators

and other markings, input voltage testing, internal diagnostics, and switch port testing. Need to unload used networking equipment? NWLQ has a program in place to purchase networking gear.

Recurrent Technologies

Recurrent Technologies has been around since 1996 and specializes in the resale of refurbished Cisco network gear and Sun Microsystems servers. Other products sold by Recurrent include Brocade, Dell, Extreme Networks, Foundry Networks, HP, and IBM. The company recently added gear and software from Oracle, Extreme Networks, and Juniper Networks to its hardware stable.

All refurbished products carry a one-year warranty. Recurrent also has a program in place for purchasing hardware; the company comes onsite, appraises your hardware, performs diagnostics, and pays immediately if

SNAPSHOT

Recurrent Technologies

A Cisco and Sun specialist that also features gear from Oracle, HP, Brocade, Dell, and others

www.Processor.com/Recurrent

no problems are revealed during diagnostics and inspections. To start the process, prospective sellers can either call Recurrent or fill out a simple bid form on its Web site.

Baker Street Resources

If you need to get your hands on a variety of networking and data center products and don't mind used equipment, take a look at BSR (Baker Street Resources). The Atlanta-based reseller has a wide variety of used products in its catalog, including phone systems (Avaya, Nortel, and miscellaneous small systems such as Merlin), servers (Sun, IBM, HP, Compaq), network gear (Cisco), generators (Caterpillar, Kato, Onan), UPS backups (APC, Liebert), and data center systems (Liebert, Access Floors).

SNAPSHOT

Baker Street Resources

A wide variety of gear for sale or purchase—even generators

www.Processor.com/BakerStreetResources

BSR is also the place to go if you have equipment to sell. Simply email or call with details about the equipment you want to sell. But before you call, be sure to visit BSR's "What We Buy" pages for the details you'll need to provide before selling your gear.

Computech Systems

Computech Systems has been buying and reselling hardware since 1985. The Washington-based company buys and resells gear from Cisco, HP, Sun Microsystems, IBM, Juniper Networks, and Foundry Networks. According to the company, buyers of refurbished/resold equipment can capture anywhere from 60 to 90% savings off equipment list prices.

Refurbishing used gear includes diagnostic testing, painting, and repackaging with shrink wrapping. Computech also maintains an inventory of parts for customers who pay a monthly fee, so that if a part within a piece of equipment purchased from Computech fails, customers can be

SNAPSHOT

Computech Systems

A wide variety of gear, good prices, and support after the sale

www.Processor.com/Computech2

overnighted that part as long as they call Computech before 4 p.m. Pacific time. Other services offered include dedicated spare parts kits, duplicate systems configured to client requirements and shipped ondemand, and specialized hardware repair.

Canvas Systems

Canvas Systems provides a good deal of options for used equipment, including selling, buying, leasing, renting, or trading equipment. The company's catalog is pretty deep: Hardware categories sold include servers, storage, networking, telephony, software, and voice and data. Again, brands include the usual suspects, such as Cisco, Avaya, Nortel, Microsoft, EMC, NetApp, BlackBerry, and Foundry Networks. Interestingly, the company also provides telecommunications services, including VPN, hosting, colocation, frame relay, DS1, and DS3.

Canvas Systems also provides a number of services above and beyond simple reselling and trading, including consulting, data center moves, asset remarketing and

SNAPSHOT

Canvas Systems

Features "value management specialists" and offers a variety of other services

www.Processor.com/CanvasSystems

disposal, and business continuity and disaster recovery services. The company ships overnight from its \$20 million-plus inventory of used and refurbished equipment. Also, all equipment is "Canvas Certified"; testing processes include thorough diagnostics, custom configuration, and revision to repair and/or replace nonworking parts.

eBay

Economists love eBay, and why not? The company, one of the few success stories to

emerge unscathed from the dot-com boom and bust, is nothing more than an intermediary and facilitator for buyers looking for stuff and sellers willing to provide it for a price.

Should you buy used or refurbished equipment on eBay? Well, the company does have an extensive amount of gear and software for bid on its site. But it's important to remember that eBay is an auction site, so you'll have to compete with other prospective buyers for equipment. If you urgently need a piece of equipment and can't afford to wait too long, it may be best to go with a traditional reseller. But if you have time and are willing to go through the auctioning process, eBay may be worth a try.

Processor Offerings

Check out the ads in the back of *Processor*; you'll find companies that specialize in used and/or refurbished equipment. You

SNAPSHOT

eBay

The seminal auction site sports a wide variety of equipment, but you may need patience

www.ebay.com

can also go to www.Processor.com and search the Dealer For-Sale Listings.

The Bottom Line

Buying used and/or refurbished equipment is an excellent way to save significant monies on capital equipment costs and still obtain the equipment you need to run your business. Product cycles today, even for complex hardware products such as routers, are measured in months as manufacturers continue to duke it out in the marketplace.

The result is a glut of perfectly good products whose only fault is being a few months removed from brand new. For those savvy administrators who don't see the need to slice through their budgets just to be on the cutting edge of technology, the used and refurbished equipment market-place can provide significant savings.

Buying Tips

Here are some tips to keep in mind when buying used or refurbished equipment.

Warranties rule. Look for resellers that provide at least a 90-day warranty on equipment; a year's warranty is best. Study the terms of the warranty carefully.

Service after the sale. Refurbished equipment could be more prone to possible problems; be sure the reseller you do business with will stand behind its product and give your business good support during your time of need.

Know your needs. This goes without saying: Before purchasing used or refurbished equipment, be sure the gear is sufficient to meet your needs.

Is eBay a good choice? While eBay may be a great choice to capture even better pricing, be careful. Check the reputation and ratings of resellers carefully.

Try the manufacturers. If you are concerned about purchasing from a third-party reseller, try buying directly from the manufacturer. Many have programs in place for moving refurbished gear.

To find additional used/refurbished equipment dealers, look online at www.Processor.com and find the Dealer For-Sale listings section on the home page.



Terabytes Server Storage Tech Corp.





























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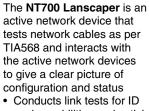
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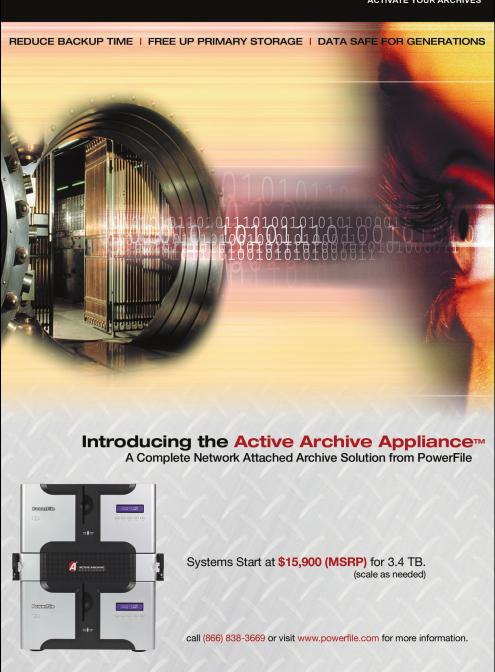
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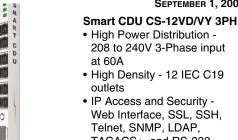
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Locking Up IT

Security Tips To Keep Your Networks, Hardware & Environment Safe

by Elizabeth Millard

EVERY SMALL to medium-sized enterprise that plugs into the Internet or generates data-basically, every SME that's operating—knows that security has to be a top concern and requires much effort, planning, and maintenance. Here are some top tips to keep an SME safe and secure.

Get Tough With Your Managed Service

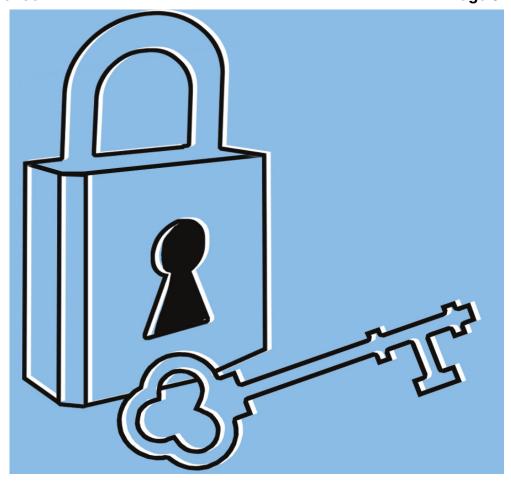
Because of the complexity of security, which often requires multiple levels of protection from hardware and software, some SMEs have turned to managed services that do most of the work for a monthly fee. These firms have many benefits, such as stronger authentication, solid policies, and extensive backup and recovery options. But companies should know what they're getting before they sign up, says Ellen Libenson of Symark Software, maker of hardware and software security products.

"When writing a contract, make sure there are no early termination fees," she says. "And find out what happens if a security event comes up. Do they monitor at night and on weekends and holidays?'

SMEs should get assurances in writing, she adds, and not be afraid to shop around if a firm glosses over its technical expertise or can't answer questions about who is monitoring the data, whether it does regular recovery drills, or how it handles integration between the service and a company's existing software.

One Size Does Not Fit All

With the proliferation of antispam, antivirus, and antispyware software, there should be an additional category, it sometimes seems: antiboasting. A number of



companies claim their software or appliances can take on multiple tasks, and it's likely true that they can, but that doesn't

mean it will be at a level that keeps IT managers sleeping happily at night. Go to Page 13

Quickest To Implement: LoJack For Laptops

In addition to booby-trapping a laptop so the data can disappear before being compromised (see the "Booby-Trap Your Notebooks" sidebar), small to midsized enterprises can also put software on the computers that tracks the machines. Especially helpful if a computer might just be missing rather than stolen, LoJack for Laptops (www.lojackforlaptops.com) works by connecting with the software maker's central site whenever an Internet connection is made. When a stolen or missing laptop contacts the monitoring center, the software kicks into high gear, calling in every 15 minutes until law enforcement arrives.

Similar software includes Absolute Software's ComputracePlus (www.absolute.com), zTrace

Technologies' Gold (www.ztrace.com), and Stealth Signal from Computer Security Products (www.computersecurity.com). The only drawback with the programs is that the laptop must be hooked into the Internet, so if it's in an employee's trunk, it won't work. But the software is affordable and reduces security risk, vendors note, and installation is jiffy-quick.

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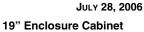
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Tips

Keeping The Data Center Operating Smoothly

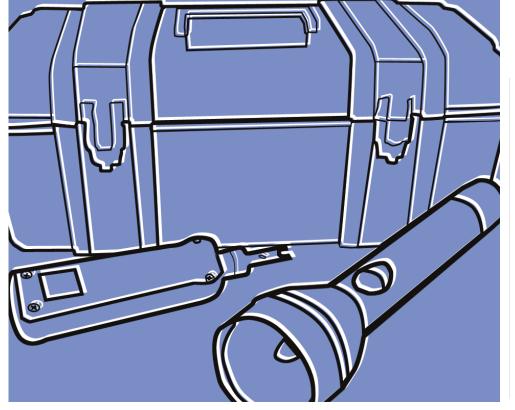
by Chris Jackson

TODAY'S DATA CENTER is a conglomeration of technologies all shoehorned into rows of racks sitting astride raised floors. Whether you're operating your own data center or leasing rack space from a colocation facility, maintaining a smooth operation can be a challenge for even the most experienced staff. To ease this burden, we've assembled a series of tips that will help keep you focused on the tasks at hand.

Label Your Cables

There's nothing worse than trying to trace a cable run when installing or troubleshooting a networking problem in your data center. Even a two-rack cage in a colocation facility can become quickly unmanageable without proper labeling of your Ethernet, Fibre, and SCSI cabling.

Take the time when deploying new switches, routers, and other cabled devices to properly label their cables at each end. Don't forget to include KVM cables, as well. A good labeler will pay for itself the first time you have an outage and can't find the corresponding connector.



If you've configured your switches with VLANs, be sure to have a physical copy of their configuration for quick swapping of cables. This can be a simple spreadsheet or a more elaborate Visio diagram. Although it's a good idea to keep this type of document online for easy updating, it's also invaluable to have a physical copy handy for those occasions when a monitor isn't in sight. It's also a good idea to label network devices and patch panels, as well. In short, label everything that's not tied down.

Dedicate Your Tools

It's 3 a.m. and you're trying to troubleshoot a faulty network drop. You look around the data center, trying to find your Fluke probe. After searching for 20 minutes, you find an old cable tester that'll have to make do. Realizing you need to reconnect the Ethernet cable to your patch panel, you reach for a punch-down tool. Unfortunately, your co-worker borrowed it to install some phone jacks and didn't leave it where you expected.

Although giving your co-worker an early wakeup call may be a satisfying course of action, keeping site-specific toolkits available will help you complete

Go to Page 14

Most Unusual: Music To Your Ears

Working in a data center can be a unique auditory experience. Not that there's a cacophony of sound but more a constant level of white noise from server fans and power supplies. Not only can this sound be distracting when you're troubleshooting a problem, it can also pose a safety hazard in some situations.

To improve your concentration, an MP3 player with a set of headphones can do wonders. Some system engineers prefer a calm classical score, while others prefer heavy metal for their ambience. Just be sure that you keep your pager or cell phone on vibrate so that you don't lose track of time.

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Mobility-Related Tips For Your

SME

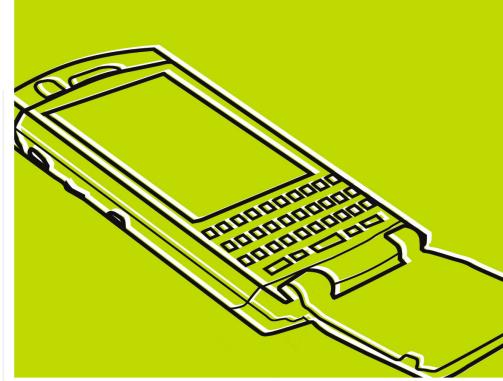
Get The Most Out Of Your Portable Devices

by Robyn Weisman

As mobile devices become ever more ubiquitous and varied, trying to choose among the many flavors and models out there, let alone managing them in a streamlined and logical fashion, can be overwhelming. While you can go in myriad directions in this space, we have brought together some tips from the experts that might help you out.

Check Smartphone Policies

When you're buying your first smartphone, it's a good idea to make sure you can return it. Although this may seem obvious to some people, the reasons behind this tip may not be. "You will not know how you are going to use it or what kind of smartphone user you will be until you actually have it," says 4SmartPhone co-founder Patrick Gilbert. Most places give the user 15 to 30



days in which to try out a smartphone, although the user will be stuck with whatever service plan for which she signs up.

Find The Right Smartphone For You

According to Gilbert, there are more than 450 smartphones, not including BlackBerry's line of mobile devices in all sizes and offering loads of varying capabilities. "People here tend to think of smartphones as big PDA-like phones like the Treo or the BlackBerry, but the little ones have not been well-publicized; I'm not sure why," Gilbert says.

The Cingular 3125 flip phone (www .cingular.com) is smaller than the Motorola RAZR (www.motorola.com) that runs Windows Mobile and provides users with PIM capabilities, push email, and the ability to listen to MP3s. Meanwhile, the Verizon XV6700 (www.verizon.com) offers a wide side-opening keyboard that slides out from underneath the main body of the device, on-screen dialing, Bluetooth capability, and compatibility with Verizon's 3G EVDO (Evolution Data Optimized) network.

For Gilbert's part, choosing the right smartphone boils down to your needs. When he is traveling, Gilbert prefers a PDA-style phone so he can stay connected without having to drag a laptop around. When he's out on the town, however, he likes to use a small phone that he can fit in his pocket. Because Gilbert uses GSM network phones, he simply swaps the card that comes inside GSM phones from his PDA-style phone to his smaller phone,

Go to Page 14

When you're **buying your first** smartphone, it's a good idea to make sure you can return it. Most places give the user 15 to 30 days in which to try out a smartphone.

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Installation

Get The Most Out Of Storage

Continued from Page 1

The answers can be tougher than you think. Just searching unstructured data—the millions of Word, Excel, PDF, and other docs outside CMS (content management systems) or database apps—is hard enough. It's even harder when a lawsuit looms, pushing the search price into six figures. And don't forget about Sarbox and HIPAA, which burden storage with privacy and retention demands.

To lighten the load, classify your network's data based on its content and manage its storage based on how it's classified. Or to put it more simply, "Manage from the information down" and not the equipment up, in the words of Larry Cormier of Scentric. The company's Destiny classification appliance (www.scentric.com) lets you sniff out data on your network, then

Most Unusual: Open Source

Open source is still exotic to some companies. They avoid it, preferring mainstream commercial software they view as safer. But if you think open source is off the beaten path, think again. It's gaining storage market share with the help of big-name deployments. Servers from open-source systems power systems at mainstream names such as Sony, NASA, and Universal Studios.

And virtualization tool XenSource, whose open code "leads to much quicker feature evolution and bug fixing," says CTO and former Cambridge professor Simon Crosby, is supported by IBM and Novell for SuSE Linux. Crosby believes the open-source model, where code is tested by hundreds of programmers, speeds its development. The bottom line? Open source may not be so unusual after all.

catalog it, move it, store it, encrypt it, or even delete it based on policies you set with your legal and governance teams.

Let's say you need to find all spreadsheets with customer phone numbers or Word docs with market research on the competition. "With a classification product, you can identify where those documents, spreadsheets, and email may exist," says Cormier. Then you can move them to encrypted storage or burn them to disk for legal review, making the information—not the storage equipment—the prime factor. Scentric's Destiny, along with products from Kazeon (www.kazeon.com) and Abrevity (www.abrevity.com), dominate this field.

Back Up Over The Air

Wireless backups can safeguard your data in a pinch, according to Cingular's John Kampfe. "God forbid you have another situation like Katrina, where you could be out a couple of weeks, where your wired situation is down but your wireless is working," he says. But if you are, you can run backups over a high-speed wireless circuit.

Biggest Immediate Payback: Consolidate & Virtualize

For a quick return on your storage efforts, stop the practice of one app/one server, in which each new application gets a new server. True, it makes things easy to install, and in theory it keeps things more stable. But it promotes server sprawl and underutilization, pushing cooling

and power bills through the roof. Instead, consolidate and virtualize servers to reduce their numbers from 40 to four or 80 to eight. Popular virtualization tools include those from VMWare (www.vmware.com) and XenSource (www.xen source.com).

Cingular's Wireless WAN Connectivity Service (www.cingular.com), which runs across its EDGE and 3G broadband networks, helped one Florida retailer keep its point-of-sale service running when other firms were still rebuilding.

According to Kampfe, the service automatically fails over when your wired system goes down, letting you transfer mission-critical data through an onsite wireless router. "We work with numbers of partners like Digi, Junxion, and others. They have routers that are certified by Cingular."

Customers pay a monthly fee for each installation, but they can pool airtime from different installations, transferring unused minutes to an installation that needs it to avoid overage fees.

"For the most part now, it's using our EDGE network," says Kampfe, "which is about three times the speed of dial-up." But 3G broadband is on the way, and it offers speeds in the range of standard (that is, wired) broadband circuits.

Double Trouble

One way to cope with storage problems is to store less data. It sounds easy, but telling users to send less email or cut down on spreadsheets is a fool's errand.

But you can reduce the amount of duplicate data you store. Whether you call it record linkage, list washing, co-reference resolution, or simply deduplication (the most common term), software can help you find duplicate content—emails, database records, unstructured documents, and, depending on the software, even blocks or portions of documents—that cuts down on storage space.

How much? One vendor, Avamar, claims its Axion product (www.avamar .com) can reduce data storage by 300 times. Other deduping software includes Contentsaaf's Saafer 1.4 (www.content saaf.com) and EMC's Documentum Client for Outlook (www.emc.com), a CMS tool that includes an optional deduping service. They all deal with common data types (such as Word docs, PDFs, XML files, and so on) and automate the duplicate search across your network, finding repeats and reporting them to you. 🔃

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Defense In-Depth

Continued from Page 1

Reduce The Exposure Window

Reducing the exposure window of an attack can be especially challenging for an SME.

"Because SMEs don't have a command center and may not necessarily have security expertise, they need more automated security checks and balances," according to O'Brian.

Taking the chance of human error out of the equation is a proactive step for SMEs to reduce the exposure window of

Mitchell Ashley, CTO of StillSecure (www.stillsecure.com), the maker of SafeAccess, recommends a multilayer security model starting with a baseline of a firewall, VPN, and antivirus for the directing of

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network traffic. Antivirus software should be deployed on the desktop, at the firewall level, and on the email gateway. His vision for the next tier of security is intrusion prevention and detection software.

O'Brian also recommends the automation of the first-line security tasks: "Accordingly, such enterprises should deploy solutions that do the heavy lifting, reducing the amount of manual analysis required. This applies to threat prevention and response solutions."

Both Ashley and O'Brian recommend the implementation of NAC (Network Access Control) systems, a relatively new security technology that has gained a foothold this year and is due to grow into next year. NAC systems are software solutions designed to protect the networks and provide access control to all devices on the network, regardless of whether they reside behind the firewall or are remote users. The ability to assess and continually reassess network policies is integral to remediation efforts if an intrusion does occur and your network perimeter is compromised.

Another step SMEs can take to reduce the exposure window is to implement rigorous patching plans both at the server and desktop levels, including auto updating of browsers, office suites, and operating systems.

Narrow Your Focus

"Practically speaking, enterprises cannot protect every asset within the enterprise to the level desired. So they need to focus their attention on high-risk, high-value areas within the network," according to O'Brian. He further states, "In some cases, these may be servers containing customer records in a database. In other cases, these

may be core business processes such as their transaction network. For SMEs, losing a critical resource may put the company out of business. Accordingly, these assets, including the supporting infrastructure, must not be compromised."

Ross Ortega, president of GraniteEdge Networks advises, "Focus on what's important, what is business-critical infrastructure, and then draw an envelope around it."

Ensure Policies & Configurations Work As Planned

Under defense in-depth, Ashley emphasizes the importance of putting policies in place that protect end points such as laptops and desktops, which is a step away from the traditional network defense models. "Take a guilty until proven innocent approach," he says for devices accessing your network.

User security education is integral to the defense in-depth security model. StillSecure's Ashley says, "Focus security training on actions an end user can do on their systems." This practical approach to security training should also use real-life examples

O'Brian states, "Many damaging security incidents start from humble beginningssuch as being careless with sensitive data or employees not staying current with the latest patches. This extends beyond just 'Joe Employee' and into the IT team—where patch management, configuration management are tedious jobs that can easily go awry. Solid policy that is regularly communicated and enforced will reduce a company's exposure to incidents arising out of simple mistakes."

After user education comes monitoring, and O'Brian says, "Though education helps, it does not cure the issue of human error. Accordingly, enterprises must monitor user behavior and must establish automated checks and balances to ensure network

Defense In-Depth Best Practices

- · Reduce risk to high-value assets by reducing the exposure window and targeting the response.
- · Increase security team effectiveness by reducing data needing to be assessed by a factor of 100.
- · Improve overall security posture through ensuring policies and configurations work as planned.
- · Decrease response time from hours and days to minutes through visualization process and the ability to connect the dots, pinpointing resources and internal patient zero.
- Bolster compliance by validating the extent of threat reach in network and through policy checks and balances.

configurations and security policy is being followed. This extends to regulatory compliance as well. Regular monitoring and proactive testing will expose minor problems before they turn into major incidents."

Validate The Extent Of Threat Reach

When a network security threat infiltrates your network perimeter, it's imperative to validate the extent of the threat in short order. O'Brian of GraniteEdge Networks emphasizes the importance of behavioral approaches, which go beyond typical signature-based security solutions that have been the traditional first line of network defense.

Implementing defense in-depth strategies to protect your SME's network infrastructure requires a new approach to network defenses, additional best practices, and a focus on your SME's most critical network assets.

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Locking Up IT

Continued from Page 9

"Many places say they have everything in a single application," says Josh Lin, director of marketing and business development at CP Secure, a developer of anti-malware products. "These unified threat management products usually do have everything on the checklist, but they just don't have very deep coverage."

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Often, he notes, there might be tough fire-wall protection, but the antivirus component won't have a very large signature library or isn't updated as often as it should be. Many products that are sold to SMEs tend to be shrunk down from enterprise-class applications, leaving some elements out in the process. So when shopping for software and hardware, it might be best to buy several components that work well together and can be monitored simultaneously rather than going for the bundled approach.

Beef Up Your Network Access Control

A great way to stretch limited resources, NAC (network access control) has several main advantages, according to Dan Clark, vice president of marketing for Lockdown Networks, a provider of switch-based NAC products.

"First, a proper NAC system lets you prevent risky machines from being on the network until they're no longer risky," he says. "Second, devices can be tested for the presence of specific threats and kept off the network before they impact other devices, and third, by protecting the network, enterprise productivity is enhanced."

When evaluating NAC vendors, Clark recommends avoiding products that enforce security policy using DHCP (Dynamic Host Configuration Protocol) because it's too easy to circumvent. Also, look at network performance: Inline devices are usually derived from IPS or IDS packet-inspection technology, he says, and may cause problems because of false results. Make sure that any NAC solution includes assessment capabilities, Clark says. "If you need to install Nessus or other external scanners, the TCO is going to be excessively high."

Intrusion Prevention Is Too Young To Babysit Itself

Intrusion detection and prevention systems are the hottest appliances right now,

says Ryan Hunter, a consultant for Watson Wyatt Worldwide who advises organizations on IT issues. Within the past few years, though, IPS has been edging out IDS at many companies, as IT departments

IPS space," he says. "It's far from perfect, and there will be some growing pains as it gets better."

At Watson Wyatt, IPS is complemented by a managed security service that employs

"Many places say they have everything in a single application. These unified threat management products usually do have everything on the checklist, but they just don't have very deep coverage."

-CP Secure's Josh Lin

work to keep intruders from getting in, rather than nabbing them when they're already inside.

But the technology is still evolving, Hunter notes. In general, the systems have to be very finely tuned and tailored to every SME. "There are lots of challenges in the real, live human beings instead of technology to do monitoring and watch external connections. For those SMEs that can't afford such a one-two punch, Hunter recommends simply being aware that IPS won't stop all the bad guys and putting additional layers of security in place.

Most Unusual: Booby-Trap Your Notebooks

Network security and authentication are vital, but what happens when a laptop goes missing due to theft or negligence? Even if the thieves are only interested in selling the hardware, the machine could make its way to more sophisticated criminals through the black market, says Cam Roberson, director of marketing communications at data security firm Beachhead Solutions. Because of that, an increasing trend is a full-scale data wipe. With software like that from Beachhead (www.beachheadsolutions.com), an IT department can create a set of triggers that recognize an unauthorized user and either destroy all the laptop's data or invalidate the encryption key, Roberson says.

"The product works by silently monitoring user behavior," he says. "If triggers are set off, defensive measures can be taken, all the way up to wiping the data clear. It seems extreme, but there's momentum for data destruction, after hearing about all these incidents where data was compromised because of stolen laptops."

Also helpful in setting defense rules is firewall software from vendors such as Trend Micro (www.trendmicro.com), Symantec (www.symantec.com), McAfee (www.mcafee .com), and Zone Alarm (www.zonealarm .com).

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Tip-Top Maintenance Tips

Continued from Page 10 tasks on time and minimize service outages. In addition, using site-specific toolkits will insure that you're using the

For the amount of use they see in a data center, LCD screens are disproportionately dirty. Although most food and beverage is proscribed in data centers, it seems as if LCD screens are magnets for food debris.

proper tool for the job: All it takes is inadvertently using a magnetized screwdriver inside a six-figure server to ruin your day. Make a list of essential tools and inventory them after each job to ensure that you didn't leave one under your data center's raised floor.

Also plan for routine tasks such as cleaning under raised floors and in crawl spaces. A set of knee pads helps with the former, while a variety of step stools and ladders will make safe access a breeze.

The real key is keeping these toolkits dedicated to the data center or network operations center. It's far too easy for tools to disappear or "grow legs" if they're not inventoried on a routine basis. Although purchasing duplicate tools is more expensive than using a common set, tools are far cheaper than downtime.

Let There Be Light

Your data center is spotless, illuminated by banks of quietly humming fluorescent lights. Those lights won't help you when working in a cramped closet trying to read handwritten labels on a patch panel. Nor will they help when diagnosing cable runs

Biggest Time-Saver: Spare Parts List

Most of the equipment in a data center is deployed over time—a server here, a switch there—until your racks are full of a wide variety of equipment. This accumulation of equipment can make it hard to manage when it comes to spare components. The trick lies in keeping a spare parts inventory list accessible from the data center.

This list should contain a listing of each data center component with its in-service date as well as other descriptive information. It should

beneath your raised floor or above your drop ceiling. If you can never be too rich or too thin, you also can never have too much light. Make sure your toolkit has at least one flashlight, as well as a spare set of batteries. A hands-free light (often called a coal miner's lamp) is also worth considering so that you can use both hands when needed.

Clean Screens

For the amount of use they see in a data center, LCD screens are disproportionately

also include a list of key spare components that you keep on hand, components that are stored in a structured, organized manner.

The payoff comes when you have a failed HBA, defective SCSI cable, or other system component that needs to be replaced. With the seemingly endless variations of SCSI connectors, drive interfaces, network cards, and other network paraphernalia, having your spares listed properly and categorized for easy retrieval can shave hours off your annual downtime.

dirty. Although most food and beverage is proscribed in data centers, it seems as if LCD screens are magnets for food debris. Keeping things clean helps instill a sense of order, and taking a few moments to keep your monitor screens clean is time well spent. Cleaning products such as Klear Screen cleaning kits (www.klearscreen.com) and Advantus' GlareKleen wipes (www.advantus.com) do an excellent job of cleaning your monitor without damaging it.

Mobility-Related Tips For Your SME

Continued from Page 11 something that makes GSM network phones worth checking out.

Learn Tips For Using Your Device's Features

Diving into the world of smartphones means, for many, learning a new operating system. Joe Fabris, director of wireless solutions at Palm, offers a few tips for you to give to newbies so they can take advantage of Windows Mobile functionality (and save you IT headaches in the process).

First off, Windows Mobile provides users with a fully searchable, context-sensitive help system that dispenses in-depth instructions from any program. To activate this feature, select Start, Help or select Start, Programs, and Help. Windows Mobile also offers a "Quick Tour" feature to help users get acclimated to the OS.

Select Start, Programs, and Quick Tour to get this running.

Fabris also points out a couple of tips that relate to powering your Windows Mobile device. To turn off your wireless connection, press and hold the Power/End button. "This turns off all wireless connections but not the organizer or apps," Fabris says. "Windows Mobile calls this 'Flight Mode On,' which means data and phone off."

Finally, Fabris offers these basic productivity pointers. To display your next appointment, tap the current time in the upper-right corner of your screen. And if you can't remember the name of a contact but remember the company he works for, select Menu in the Contacts List view and select View By and Company.

Select The Right Software

Choosing the right software makes your mobile devices that much more useful. Sure, it's nice to have a camera, record your own ringtones, or record 40-second videos of your toddler on your smartphone, but what applications can make your life easier (and perhaps allow you to scrap your laptop in many cases)?

Beyond contact managers and email programs, several applications exist that are worth checking into. Morgan Slain, CEO of SplashData, says one such application is a password manager that can store sensitive information, such as usernames, logins, and account numbers because that way your information is securely stored and also immediately accessible.

Most Unusual: Unified Messaging

Voice mail is so 20th century. So are faxesand email for that matter. But integrating all three or some combination makes for what Rhonda Morgan, vice president of ATCOM Business Telecom, calls unified messaging.

"Most businesses use [those] three types of communication. What unified messaging does is allow a business to combine these three into one place. So when you check your email, you can visually see your emails, your voicemail messages, and your faxes. You have one place to look for any type of message," Morgan explains. "Likewise, when you call to get your voicemail, you can also hear your emails read to you [with] text-to-speech [capabilities] and be notified of your faxes."

According to Morgan, a standard basic package for a unified messaging system can combine voicemails and emails. From this starting point, you can add modules to customize your system, providing text-to-speech capabilities, fax integration, and other features that best suit your needs, Morgan says.

Unified messaging may appear to be cuttingedge technology, but it's also quite useful in its message streamlining. "If you are mobile, [unified messaging] allows you easy access to all of your messages," says Morgan. "It also allows you to respond to any message via your voice or to send an email via your voice instead of typing."

Biggest Timesaver: An App That Saves & Maps Contact Info

Make sure you have an application that can save and map your contact information between smartphones. Mobile phones vary in their specifications, says Bogdan Mosteanu, marketing manager at Susteen. For example, Motorola phones only allow for one phone number per entry, while LG phones allow multiple numbers for a single contact. Therefore, you need to be able to map this information correctly, so someone using that LG phone isn't saddled with multiple entries.

Moreover, if your company decides to switch carriers, change handsets, or replace lost or stolen handsets, you want to be able to migrate your current data to these replacement phones seamlessly (unless you have a budget that allows for hours, perhaps days, of reinputting contact after contact by hand and then proofreading the data), which the right application or a hosted service can provide.

Finally, being able to automatically map data from phone to phone makes sense when assigning new employees new mobile devices. For example, Mosteanu says, it's a timesaver to include a standard contact list, perhaps your clients from the company's CRM application, with phones assigned to new members of your sales team.

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PHYSICAL

Cabling

■ Panduit says that its new Opti-Core and QuickNet Pre-Terminated Trunk Cable Assemblies offer faster installation, reduce waste, and make use of slack storage. The Assemblies are intended for permanent, high-density links in data centers, including zone, main, and horizontal types of distribution areas. 150- and 550-meter links are available, as are 10G/G versions, which support transfer speeds up to 10Gbps.

COMMUNICATIONS

Network & Systems Management

- Lantronix's WiBox device server lets administrators manage devices over a network or the Internet. It supports LAN connectivity, as well as the 802.11b/g wireless standards. The industrial-grade WiBox has an embedded Web server and is RoHScompliant. It also includes a bridging capability that lets it connect Ethernet devices to an 802.11 wireless network. Lantronix sees this device being used in healthcare, industrial automation, and security markets, among others.
- Net Optics has introduced the GigaBit Fiber Teeny Tap, a palm-sized test access

port for mobile network managers. The device uses no power and requires no IP address to enable full-duplex monitoring over multimode fiber using 1,000Mbps passive access ports. The device is transparent to the network but provides invisible, secure network monitoring. The Teeny Tap comes with a carrying case containing a kit that includes all network and monitoring cables for PnP use.

Security

■ Datacard Group announced its comprehensive 1-2-3 Easy ID card system, which consists of the card printer, camera, cards, supplies, and software required to create ID cards. The 1-2-3 Easy ID card system provides small to medium-sized businesses with the enhanced security of photo IDs. Additionally, Datacard offers purchasers of the 1-2-3 Easy ID card system a clear upgrade path, should they need to upgrade to a higher-output, more robust system.

Datacard also introduced the entry-level Datacard SP25 card printer, which lets small and medium-sized businesses implement a photo ID program for added security. The SP25 prints high-quality photo IDs in full color or monochrome. Well-suited for low-volume applications, the SP25 lets users rewrite and reuse ID cards in excess of 500 times with its rewriteable capabilities.

.

■ Ingrian Networks announced the Ingrian EdgeSecure Platform. EdgeSecure provides cost-effective and secure hardware-based encryption for retailers and banks that need to achieve PCI (Payment Card Industry) compliance. EdgeSecure can be extended to thousands of locations while being centrally managed by one DataSecure appliance. By combining granular encryption capabilities at the branch location with a centralized management model, administrators can monitor, troubleshoot, and maintain individual EdgeSecure appliances from the data center. In addition, key management, policy management, logging, reporting, and software upgrades can be handled from a central location via the Ingrian Enterprise Manager.

a product that helps reduce deployment time for companies who are seeking SIEM (security information and event management) or NBA security. QRadar 5.2 has auto-discovery and auto-tuning capabilities, as well as correlation rules that prevent false positives. It has predefined templates for enterprise, ISP, and university customers and a Tuning Wizard that allows event-based tuning. QRadar 5.2 starts at \$37,000 and can scale to meet the needs of the customer.

Switch

■ Advantech says that its new industrial Ethernet switch offers several features of a fully managed switch at a low price of \$395. The rugged EKI-6538 sports eight 10/100Base-TX ports and supports wide dual-power input (10 to 48VDC), network traffic management and diagnosis, a 0 to 60 degrees Celsius operating temperature range, virtual LAN segmentation, QoS with Layer-2 802.1p Priority Queue control, and other features.

Wireless

■ Berkeley Varitronics released a new wideband BumbleBee-EX receiver for rugged WiMAX spectrum analysis. The handheld BumbleBee-EX receiver measures between 2 to 4GHz and 4.9 to 5.9GHz, which is ideal for studying and logging 802.16 WiMAX, 802.11b/a/g Wi-Fi, VoIP, Public Safety Band, and Bluetooth RF interference. In addition, the EX includes a color touchscreen user interface and ruggedized, water-resistant casing.

END NODES

KVM & Console Access

■ Aten has introduced four new 2- and 4port KVM devices as part of its KVMP Go to Page 17

Nexsan & RELDATA Get Connected

Multivendor Product Aggregates Storage From Different Devices

by Paul Ferrill Jr.

KEEPING UP WITH the latest advances in storage technology represents a significant challenge for IT administrators. While the urge to go with bigger, better, and faster is always there, it might not be the best path if it means more headaches for the IT staff. Should you scrap the systems you already have in place to go with the latest stuff or just add it to the mix?

Nexsan and RELDATA have teamed up to provide a solution that meets multiple needs. The RELDATA IP Storage Gateway 9200 functions as the central hub for connecting multiple storage systems together. The IP Storage Gateway 9200 demonstrates

maximum flexibility with six Gigabit Ethernet ports, two 2Gbps Fibre Channel ports, and two Ultra320 SCSI ports.

Along with the interface flexibility comes the ability to enable remote IP replication over a WAN. The RELDATA IP Storage Gateway 9200 supports remote volumes over iSCSI as well as file-level tools such as rsync and NDMP. Client workstations and servers will see the storage as iSCSI targets, SMB/CIFS shares, or NFS shares.

As a side benefit, the IP Storage Gateway 9200 makes it possible to extend existing Fibre Channel SANs across the WAN. The key to this feature is the ability to utilize block-level iSCSI along with the file-level NAS storage across an IP network. This



SNAPSHOT

Nexsan/RELDATA IP Storage Gateway 9200

\$11,000 for a single controller Nexsan SATABoy storage solution

\$36,795 for the complete Unified Smart IP Storage System with 7TB of storage

Makes it possible to consolidate multivendor storage and make it look like a single storage volume pool while adding low-cost SATA disks

www.Processor.com/Reldata

capability makes it more feasible to both consolidate and distribute storage across multiple locations as necessary.

Nexsan's SATABoy storage array provides top-notch performance at low-end prices. Each SATABoy has two 2Gb Fibre Channel ports per controller and a single iSCSI port with 14 disk bays in a 3U package. Total raw storage using 500Gb drives would be 7TB. Dual redundant power supplies provide an extra measure of protection for mission-critical applications.

While most traditional high-end storage systems have typically used SCSI disks, the increased reliability and speed of SATA drives has made them much more attractive. When configured with the appropriate RAID protection, they offer a significant cost savings to SCSI drive alternatives for essentially no loss in reliability.

Competition for the IP Storage Gateway 9200 includes the EMC Celerra NSX (www.emc.com) and IBM's NAS Gateway 500 (www.ibm.com). The Celerra NSX provides integration with NAS and iSCSI products such as the Symmetrix DMX or the EMC CLARiiON network storage systems. IBM's NAS Gateway 500 provides user-level access to a SAN or standalone Fibre Channel device. Both products support NFS and CIFS file systems.

Switch

www.Processor.com/ProCurve2

SEPTEMBER 15, 2006



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May 6, 2005



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Continued from Page 16

product line. The devices include the Master View CS-1732A/CS-1734A, CS-1742/CS-1744, CS-1762/CS-1764, and CS-1772/CS-1774, all of which have USB hub ability and multiplatform support. The CS-1772 and CS-1774 models are Ethernet switches that integrate 3-port 10/100Mbps (for the CS-1772) and 5-port 10/100Mbps (CS-1774) switch hubs and a 2-port USB 2.0 hub into the devices, letting users access a network and share peripherals among connection systems. All of the models are compatible with major OSes, and the CS-1732A and CS-1734A models are also compatible with DOS

■ Minicom Advanced System's new IP Control device lets administrators operate a remote support system, diagnose problems, and monitor and maintain them from anywhere in the world. An out-of-band package based on KVM technology, the IP Control device doesn't conflict with any software as it doesn't run on dedicated software. Minicom will showcase the device next month at Remote Monitoring & Networking 2006.

Printer

■ PrintekMobile announced the new FieldPro RT43, a direct thermal printer with a lightweight, rugged design and advanced operating features for a base list price of \$795. The FieldPro is a fully portable printer that is battery-operated, features drop-in paper loading for fast roll changes, and can withstand the rigors of everyday mobile use. The FieldPro carries an IP54 rating for water and dust resistance and operates successfully after repeated 4-foot drops to concrete. Models will be available for cabled (serial or USB), Bluetooth, or Wi-Fi applications. The printer also has an exclusive "Universal Port" that accepts connection to barcode scanners, signature capture pads, and more. The FieldPro weighs about 20 ounces with battery installed and is about the same size as a 3-inch printer.

Projector

■ BenQ has launched two new cross-function projectors: the BenQ MP611 and MP611c. The MP611 features 2,400 ANSI lumens brightness, while the MP611c has 2,100 ANSI lumens. Both models offer a

2,000:1 contrast ratio and an advanced Whisper Quiet cooling system that reduces the operating noise levels to 24dB. Adjustment options for both models include a Blackboard function and nine sets of application modes, which provide instant optimized settings for brightness, color saturation, and contrast. The Blackboard function automatically adjusts the projector's settings to maintain a projected image on a blackboard that appears clear.

Server

■ Bull released the new NovaScale B260 and B280 blade servers based on the dualcore Intel Xeon 5100 processor. The Nova-Scale B260 model is designed for use as a server for ERP applications, Java, and Service-Oriented Architecture applications, while the NovaScale B280 is designed to consolidate multiple servers. The NovaScale B260 supports up to 16GB of DDR-2 Fully Buffered DIMM RAM, up to two SFF SAS hard drives on each blade, and one I/O slot for two additional Fibre Channel or Ethernet channels. The NovaScale B280 supports up to 32GB of DDR-2 Fully Buffered DIMM RAM, two internal disks for an optimum performance, four independent 1GBps Ethernet channels, and one I/O slot for two additional Fibre Channel or Ethernet channels.

Storage

■ IBM has introduced the IBM System Storage TS7700 Virtualization Engine for more effective tape processing, grid connectivity, automated replication, and disaster recovery. The successor to IBM's TotalStorage Virtual Tape Server, the TS7700 includes the same basic performance, capacity, and design of IBM's System Storage TS1120 tape drives, as well as a new controller that's based on IBM System p server technology. The TS7700 can control physical volume pooling, cache management, cross-grid automatic copy, and copy mode controls. IBM has also included improved statistical reporting tools. The starting list price of the TS7700 Virtualization Engine is \$493,080.

■ The d2 SATA II 3Gbits Hard Drive Series released by **LaCie** supports a 3Gbps interface and NCQ (native command queuing) and features a 16MB cache. The d2

Go to Page 18

Event-Based Two-Factor Authentication

CRYPTOCard Releases New CRYPTO-Server 6.4 Product

by Tony Bradley

PHISHING SCAMS AND identity theft both continue to be a rising problem. A user may be targeted with attacks designed to steal his username and password for his computer or for various accounts such as his bank or credit card access credentials. Next to the social engineering of the user, the password itself is the next weakest link in the access credentials security chain.

The FFIEC (Federal Financial Institutions Examination Council) has stated that single-factor authentication, such as a password, is inadequate protection and that financial institutions should require two-factor authentication, such as an access token, to protect customers and reduce losses resulting from identity theft. Various other regulatory and legal requirements, such as Sarbanes-Oxley or

HIPAA, also mandate some form of two-factor authentication in some cases.

CRYPTOCard is one vendor offering a solution for more secure authentication. Unlike other popular authentication tokens, such as those from RSA (www.rsasecurity.com), the CRYPTO-Server solution is event-based. Time-based solutions such as RSA's create a password that is only good

SNAPSHOT

CRYPTOCard CRYPTO-Server 6.4

\$499 for a five-user package

Two-factor authentication product that works with multiple platforms; allows users to authenticate even when disconnected from the network

www.Processor.com/CryptoCard

for a specific timeframe (one minute, for example).

According to Judy Anjowski, channel manager for CRYPTOCard, with CRYPTO-Server 6.4, "The user pushes a button, inserts their smart card, and enters a PIN, etc., which

products like the RSA tokens already mentioned, or other token authentication vendors such as Authenex (www.authenex.com).

CRYPTOCard has the only solution for Mac OS X, and it was the first with an authentication product for Red Hat Linux. For multiplatform, heterogeneous environments, this cross-platform flexibility may be important.

The CRYPTOCard product also stores a finite cache of passwords locally so that users can still generate a two-factor authentication login when they are not connected to the network. The default is 100 passwords stored locally, and the bank of passwords is replenished when the user connects to the network once again.

Unlike other popular authentication tokens, the CRYPTO-Server solution is event-based.

stimulates the token to generate a one-time password that is good only for the next login. The token and server use a shared encryption key; thereby the token and server remain in sync. Each successful login moves both the server and token to the next password."

Aside from the event-based vs. time-based approach to password creation, there are some other attributes of the CRYPTO-Server 6.4 solution that set it apart from competing

Anjowski also points out that "[CRYP-TOCard] tokens do not expire. The hardware tokens have user-replaceable batteries, which can be picked up at a corner store. These batteries need to be replaced approximately every five to seven years. Therefore, the purchase of our tokens is a one-time investment . . . no repurchase/redeployment needs to take place, saving thousands of dollars yearly."

KVM & Console Access

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May 6, 2005



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JULY 14, 2006



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JUNE 23, 2006

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Product flexibility, superior price, and best-in-class performance with up to 1,160MBps cache read performance for faster business continuity and disaster recovery applications.



August 11, 2006

COMPONENTS

InfiniHost III Lx Single-Port InfiniBand HCA Cards With PCI Express

Offer 10 Or 20Gbps Ports



IN ADDITION TO the deployment of 20Gbps InfiniBand in multi-

core server platforms, blade server platforms are driving this connectivity performance into mainstream data center and high-performance computing environments. The industry is complementing these computing platforms with a range of 20Gbps InfiniBand infrastructure solutions. The growing ecosystem of InfiniBand 20Gbps technology-based suppliers is bringing a new generation of cluster and grid deployments where the bar for application performance and resource deployment flexibility is raised to unprecedented levels.

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InfiniHost III Lx

Single-port 4X InfiniBand HCA cards that connect through a PCI Express interface

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www. Processor. com/InfiniHostLx



Product Releases

Continued from Page 17

lineup can natively boot Windows or the Mac OS and comes in 250GB (\$149.99), 320GB (\$179.99), and 500GB (\$279.99) capacities.

■ StoneFly will begin offering certified 10,000rpm and 15,000rpm SAS drives in 36 to 300GB capacities for select IP SAN configurations. The drives are aimed at such tasks as supporting transaction-intensive and high-def video streaming applications, as well as other business-critical tasks requiring high disk performance. The drives will also provide improved options for tiered storage flexibility, provide 3Gbps maximum bandwidth, and offer pinfor-pin compatibility with high-capacity SATA drives, letting organizations mix and match SATA and SAS drives in the same chassis. SAS support will be available in StoneFly's MSC product line first. Full product line support will roll out in Q4; ValueSAN, StoneFly's entry-level MSC IP SAN, will be available in SAS configurations this fall.

Components

■ Intel's Core 2 Duo processor is now available on a single board computer from American Portwell Technologies. The ROBO-8717VG2A uses the Q965 Express chipset, supports PCI Express x1, and includes two Gigabit ports and four 300Gbps SATA connectors. Additionally, Portwell announced its new RUBY-9716VG2A Core 2 Duo industrial motherboard, which also supports the Core 2 Duo processor.

Desktop

■ Shuttle's new XPC G2 2200 is a small form factor, Energy Star-certified desktop PC for the business market. The quiet 2200 uses an AMD processor in an AM2 socket and is based on the VIA K8M890 chipset that, Shuttle says, supports the graphical requirements of Windows Vista.

SOFTWARE

Application & Web Development

■ SWsoft released the latest version of SiteBuilder, its browser-based Web site-

building software. SiteBuilder 3.0, which supports Linux/Unix, has several new features for end users: The SiteBuilder wizard supports drag and drop, and the software has 11 new modules, an enhanced blog tool, and a photo gallery. SiteBuilder 3.0 has tools for administrators, including a new interface, enhanced plan management features, and the ability to install various site management levels, and has support for resellers.

Business Productivity

■ HighJump Software has introduced HighJump Supply Chain Advantage suite 9.0. This supply-chain management software includes many new features, such as Warehouse Management, Manufacturing Execution, labor management through HighJump Labor Advantage, and transportation management through HighJump Transportation Advantage (formerly Pinnacle Distribution Concepts' Freight-Logic).

Database & Data Mining

■ CA announced general availability of CA CMDB (configuration management database) and introduced automated dependency mapping technology that correlates CIs (configuration items) with business services, a feature gained from CA's acquisition of Cendura. CA CMDB helps consolidate and reconcile data to deliver a common view of a customer's IT environment, thereby providing greater management control over IT processes. Using the new automated dependency mapping technology, customers can quickly populate CA CMDB with up-to-date configuration information, including relationships between CIs. CA will offer this automated dependency mapping technology as a no-charge upgrade to CA CMDB customers.

Mobility

Accelerator 8.0, software that allows users to access their enterprise applications, data, and business processes from a mobile device. IT professionals can use Accelerator 8.0 to build custom mobile

Affordable Antispam Protection

MailFoundry Offers Enterprise-Level Control At A Price Most SMEs Can Afford

by Cynthia Lazzaro

PREVENTING SPAM AND other unwanted email can be complex and difficult. For many small to midsized enterprises, acquiring and learning how to implement the necessary software and devices is often cost-prohibitive, so they settle for programs with limited functionality, or they rely on freeware or third-party companies and end up spending money on features they may not need.

MailFoundry is a service of Solinus, which has been delivering antispam protection appliances and hosting services since 1999. MailFoundry's entry-level product, the 1150, was introduced early this year, and now MailFoundry has released an update to this product that offers SMEs enterprise-level email filtering and antispam protection at an affordable cost.

The MailFoundry 1150 is a rack-mountable, 12-inch-deep appliance that is constantly updated with new rule filters.

applications with data sources such as SAP ERP, BMC Remedy Service Desk, and Lotus Notes. Server push and differential synchronization support is available for devices using BlackBerry, Windows Mobile, or Micro Edition operating systems. Eclipse-based mobile tooling and Web-based tooling allow for development of both connected and disconnected mobile applications, and version 8.0 supports SOA, online/browser, and smart/rich client architectures. A customization wizard allows users to customize the look and feel of their BlackBerry with the Unwired Accelerator Smart Client.

Network & Systems Management

- Active Reasoning released Active Reasoning 3.3, the latest version of its IT controls automation software. The software's new features include IT Policy Reporter and support for detecting restricted data access, as well as identification capabilities. The IT Policy Reporter is a policy and control dashboard and the restricted data access detector supplements the software's ability to monitor file changes. The software also monitors privileged users by extending SQL Trace to Oracle and SQL Server. According to Active Reasoning, the new version helps administrators answer important questions related to emergency change, expected change, and segregation of duties.
- McDATA has announced a new version of its Network Management Service, which can monitor and manage Intrepid i10K Directors. Version 2.1 gives users the ability to monitor storage network infrastructures around the clock. McData says it's the only SAN vendor providing a remote management service that spans the customer's storage network infrastructure and that NMS can cut more than 50 minutes off from problem-resolution times, which results in less downtime costs to subscribers. NMS offers real-time alerts of network issues and potential system outages, plus offers daily reports for event management analysis via a secure Web portal.
- **Qlusters** launched openQRM Pro for requesting hardware and software resources

through a Web portal. openQRM provides automated approval, provision, monitoring, and reporting. It can also de-provision resources when a user no longer requires them. The software supports networks consisting of virtual LANs, multiple storage islands, and virtualization technologies including VMWare and Xen. openQRM integrates with a company's current LDAP serversand is available for \$750 per server per year.

- uXcomm unveiled the XManage 2.0, software that unites dissimilar systems and system management applications into a common infrastructure. Version 2.0 allows system builders to distribute differentiated, standards-based software that can be integrated into data centers and managed by any system or application. XManage 2.0 will translate and unify various applications and create automated system management processes. Based upon XML-driven SOA, XManage 2.0 comes bundled with major system management interfaces, a development environment based on Eclipse, and a management services engine that can be customized and extended to manage hardware or software subsystems. System builders can also use XManage 2.0 to ensure compatibility of devices across multiple product lines, and it's available in several "quick start" packages on uXcomm's Web site.
- Voltaire announced GridVision Enterprise, software for the management and automation of dynamic grid computing environments in the data center. GridVision enables automation of repetitive tasks with network, server, and storage provisioning to improve efficiency. The software creates an efficient data center by mapping the relationships between application requirements and the physical and virtual data center. GridVision Enterprise combines server and storage virtualization applications with provisioning and scheduling tools to map the physical and virtual data centers together.

Physical Infrastructure

■ Better cooling for data centers is the goal of a new partnership between **Emerson Network Power** and software developer

Go to Page 20

MailFoundry's antispam rules are based on human intelligence, meaning that there are targeted spam rules created by a team of antispam editors. This team reviews spam attacks and sends out rule updates automatically, as often as every five minutes. As a result of this method rule creation, MailFoundry is virtually self-maintaining and has the lowest false positive rates in the antispam industry: approximately one per 1 million, according to the company.

The newly upgraded 1150 has increased its user capacity from 150 users to 250. The MailFoundry 1150 also incorporates a flash boot module that enables the device to be up and running in about 30 seconds. Another feature offered by MailFoundry is the ability to back up the device configuration data to MailFoundry's network. The configuration is safely stored on its network, and in case of a catastrophic hardware failure, the configuration can be reloaded to a replacement appliance quickly. The device offers a high-

The MailFoundry 1150 has most of the advanced features of its higher-end relatives, including per user quarantine, detailed reporting, and keyword and attachment filtering.

SNAPSHOT

MailFoundry 1150

\$999 for the appliance plus \$299 for a one-year subscription

Antispam and antivirus engine that uses human intelligence and continuous updates; offers many advantages over statistical-based antivirus products

www.Processor.com/Mail

Competition for the MailFoundry 1150 includes Fortinet's FortiMail (www .fortinet.com) systems with devices for antispam protection. Fortinet also has a subscription service and FortiGuard

The MailFoundry 1150 is a rack-mountable, 12-inch-deep appliance.

speed, secure OS based on Linux and comes with a connector that allows the device to easily interface with MS Exchange and other mail servers.

Antispam. Another competitor is the Barracuda Spam Firewall (www.barracuda networks.com), which is also an integrated hardware and software solution.

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Continued from Page 19

Fluent. Fluent's CoolSim software will monitor information from Emerson's Liebert XDV, XDO, and other air conditioning units. The information gathered will facilitate computer airflow modeling and troubleshooting.

Security

■ Akonix Systems introduced its Akonix L7 Enterprise software, which is designed to help customers meet industry and government compliance regulations. Version 5.3 includes ethical boundary support, persistent chat rooms, enhanced inline disclaimer support for Jabber XCP, and Smart Tagging, which lets administrators annotate conversations conducted over an IM application. Akonix L7 Enterprise also archives and reports file transfers conducted over the IM application. The software is currently available on Akonix A1000 and A6000 IM security appliances.

■ Asigra has announced new features in its Televauting software, which the

company says will evolve into a full-scale data-protection platform. Televauting is an agentless, multisite backup/recovery software that combines utility service provisions via a disk-based WAN-optimized architecture. It provides grid-based performance and capacity scaling to support any backup load. Enhancements to the software include integrated advanced data-protection capabilities such as continuous data protection, backup life cycle management, WAN optimization, and encryption. Televauting is available from resellers and service providers.

■ Courion released its Enterprise Provisioning Suite Jump Start Options to help medium-sized enterprises automate employee identities and end-to-end user provisioning. Courion's platform provides customers with structured workflows based on common provisioning and password management needs. Jump Start Options includes Basic Access and Admin New Hire profiles for managing limited-access users. Other features include an Orphan

Account Finder, Account Termination, and Password Reset capabilities. The Enterprise Provisioning Suite Jump Start Options will be available in Q4.

Archiver 6 SEM software for assembling event logs. Event Archiver 6 now includes custom-domain capabilities as well as tools for tracking the number of computers that generate events. Dorian Software has also included features such as automatic database management for Microsoft Access and Microsoft SQL, Event Archiver Log Entry Viewer, database import filters, and support for transactionalized imports of EVT files. Event Archiver 6 is priced at \$90 per server. Volume discounts are available.

■ ForeScout Technologies has launched CounterACT 6.0 for NAC. The new version provides more scalability and granular access control and includes remote application termination, Microsoft SMS integration, deep interrogation of Mac systems,

multiconditional policy creation, high availability, streamlined policy development, geographically based policy enforcement, and an improved reporting engine. ForeScout Technologies has also announced the CounterACT CT-R appliance and the CT-2000. The CT-R supports remote offices with fewer than 50 devices and the CT-2000 supports as many as 2,500 devices. These new products will be available on Oct. 13. CounterACT CT-R is priced at \$4,995 and CounterACT CT-2000 prices start at \$48,995.

■ Lumigent Technologies released the latest version of its security and compliance database auditing software, Audit DB 5.5. According to Lumigent, the new version reduces compliance and IT audit preparation time. The software automates stakeholder-customized report creation and can create reports that trend information across date ranges. Audit DB also creates auditor and DBA-level reports that offer technical detail and regulation-based reports, such as

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Feature-Packed Storage That's Affordable

InServ Offers SMEs High-End Features In Its Lower-End Package

by Joe Lazzaro

DATA STORAGE, management, and protection are some of the most important responsibilities a network administrator has. There are many options to achieve these goals. However, for many businesses, buying a fixed size, fixed location storage device is problematic. What happens when there's so much data it can't be backed up fully because of time or when more storage space is needed?

An enterprise-class company can invest in SAN or NAS devices and take advantage of a number of beneficial features, but SMEs often do not have the capital to spend on those solutions. Also, whether an SME has a SAN or not, there is the issue of what to do about branch offices accessing data from a central location that is vulnerable to WAN connectivity. Both situations require a flexible solution that is cost effective, dynamically expandable, easy to

install and manage, and able to provide data management.

To meet this need, 3PAR has released a new storage server, the 3PAR InServ E200, to help SMEs that don't need a full SAN at a remote location but have larger storage

utility, Access Guard, and Full Copy software programs.

The included Rapid Provisioning software allows storage administrators to configure application-specific volumes and eliminate manual system resource allocation, while Dynamic Optimization enables users to use a single command to convert data volumes from one service level to another. This feature eliminates manual and

3PAR's Virtual Copy and Remote Copy are extremely simple, efficient replication technologies.

needs at those remote sites. It also provides midlevel businesses a great way to get affordable storage with enterprise-class management capabilities and tools.

The InServ E200 server is configured with 3PAR's InForm Operating System and other software found in InServ's higher-end S-Class servers. 3PARs' Inform Operating Suite is composed of Rapid Provisioning

disruptive change processes needed to align applications with data service levels.

Another provisioning utility provided by the InServ E200 is 3PAR's Thin Provisioning, which allocates storage utilization on an on-demand basis so that disk-use efficiency can be nearly 100% without a lot of administration. This allows organizations to purchase less storage capacity and add on as needed based on actual business usage.

3PAR's Virtual Copy and Remote Copy are extremely simple, efficient replication technologies, allowing customers to share and protect any application. One of the most important benefits of the feature is that this software eliminates the difficult trade-offs between maximizing either recovery time or recovery point objectives.

The InServ E200 tops out at 63TB across a maximum of 128 drives. Drives supported include 147 or 300GB Fibre Channel disks. 3PAR also has its own 500GB Nearline devices with an embedded Fibre Channel interface and optional iSCSI connectivity.

Two of 3PAR's competitors are EMC's Clariion CX3 model 40 (www.emc.com) and Hitachi's Lightning 9900 V series (www.hds.com). EMC's Clariion CX3 model 40 is a midrange option that supports array-based replication and can dynamically scale up to 119TB. The Lightning 9900 V series has a large number of built-in management tools and enables nondisruptive expansion to more than 140TB.

SNAPSHOT

3PAR InServ E200 Storage Server

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Continued from Page 20

reports for Sarbanes-Oxley Section 404. The Sarbanes-Oxley Section 404 report pack offers reports on financial data access and use and offers a historical perspective, as well as information about suspicious activities. General reporting features include the ability to classify events and audit conditions by severity and easy-tocreate reports. It also has a library of reports and works with Oracle, Sybase, Microsoft SQL Server (including version 2005). Lumigent plans to add IBM and DB2 support in the near future.

■ PortAuthority Technologies and Websense announced Deep Content Control to manage unwanted dissemination of sensitive and confidential information and data. The software helps manage how sensitive data leaves the organization and under what circumstances. With Deep Content Control, organizations can identify and prevent an employee from sending information such as credit card data, sales projections, or product source codes to an unknown or unauthorized location. Therefore, organizations can better respond to corporate governance and intellectual property protection.

Storage

- Atempo launched the latest version of its Time Navigator data protection and archiving platform. Time Navigator 4.1 includes the latest version of Atempo's storage security module, the Security and Compliance Manager version 2.0. Atempo's latest offering employs a user-friendly GUI, digital signatures, hierarchical key management, audit trails, compliance templates, file encryption and decryption, and network encryption and decryption to secure customers' storage systems. Time Navigator 4.1 supports Windows, Mac OS, Unix, and Linux operating environments and VMware ESX Servers.
- NovaStor launched version 6.7 of its online backup software NovaNet-WEB.It includes plug-ins for backing up Microsoft SQL and Exchange databases, as well as Open File Backup protection, enhanced encryption support, improved performance, and several other features focused on addressing the needs of SMEs. Other NovaNet-WEB 6.7 features include AES support, System State Backup, improved customization and rebranding options, and improved remote management tools.

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■ Yosemite Technologies announced several enhancements to the Yosemite Backup suite of products. Yosemite added backup options for SMEs using Linux with support for SuSE Linux Enterprise Server 10, SuSE Linux Enterprise Desktop 10, SuSE Linux, and Red Hat Linux. Yosemite Backup suite now supports removable devices in Linux, Windows, and Netware to simplify backup for a range of operating systems and devices. The Yosemite Backup Quick Access Tray was added to improve the usability of its Backup suite, and Yosemite's Agent for the Microsoft SQL Server was improved to support SQL 2005.

SERVICES

Network & Systems Management

■ Lumeta has introduced a new service called IPv4 to IPv6 Migration Planning Service, which will help companies use Lumeta's IPsonar network-assurance product to migrate from an IPv4 infrastructure to an IPv6 infrastructure. IPsonar uses multiple Layer 3 and 4 protocols and has a large range for locating network boundaries. IPsonar identifies a true address space, tests for application visibility, and

discovers wireless networks and OSes. IPsonar performs a number of other tasks as well, such as identifying applications that will need to make the transition to IPv6, customizing fingerprints, and locating remaining active IPv4 devices and address spaces. As part of the IPv4 to IPv6 Migration Planning Service, Lumeta will offer a timeline for migration and estimated costs based on hardware, software, network, and security resources the company will need to move to IPv6.

Security

■ Trend Micro released InterCloud Security Service to identify, quarantine, and clean bot-infected PCs. The software is designed for ISPs, universities, and other large network providers to protect their networks from botnet attacks. To detect botnets, InterCloud Security Service uses behavioral analysis technology to examine aggregated application and network infrastructure data such as DNS queries and Border Gateway Protocol routing tables. Analysis can be run in real time to identify and isolate bots before an attack or infection spreads. Trend Micro provides updates to the InterCloud Security Service to keep up-to-date on botnet activity.

Save Time & Stay Secure

CONTROL-M Brings Agentless Functionality To The Table

by Scott Koegler

SCHEDULING OPERATIONS within a single server or desktop has its own challenges, but managing interdependent tasks across multiple servers running multiple operating systems in far-flung locations can be time-consuming and expensive. BMC Software's newest offering, version 6.3 of its CONTROL-M enterprise job scheduling software, brings agentless functionality, meaning centralized control of any system's tasks regardless of operating system and security settings.

The availability of a single view of enterprise operations, along with integrated task scheduling means IT management can see and control both real-time and batch operations using the same console. The addition

of agentless operation means significantly reduced administration and complexity in maintaining version releases as well as in new deployments.

BMC's CONTROL-M product automates jobs for mainframe as well as distribto reduce or eliminate the need to maintain a variety of agents on their systems.

Rohan Lees, automation solutions manager with the National Australia Bank, has been using CONTROL-M to manage the bank's 1,000-plus servers for five years. The bank had employed a variety of scheduling tools to manage operations on its highly diversified mix of systems but has now standardized on CONTROL-M. According to Lees, "We have the deployment of updates fairly streamlined at this point, so we don't have delays in the actual deployment now. But we still experience delays ranging from two to four weeks in configuring the agent packages prior to delivery. Eliminating the need to use agents will let us avoid those delays."

Security is another area of concern for many organizations deploying management agents because the installation and update

SNAPSHOT

BMC Software CONTROL-M

Starts at \$4,000 for a work group server; enterprise packages available starting at \$40,000

Includes an agentless option that has the potential to reduce deployment time and security risks for large enterprises

www.Processor.com/BMCSoftware

simply overlook because of the necessity of the job. But with the scrutiny imposed by regulations such as Sarbanes-Oxley, the same level of access is no longer acceptable.

Lees looks forward to additional savings by way of reduced head count. "As we remove 60 to 70% of the agent technologies that are now deployed, managers will be looking at how the reduced staffing need will affect their operations," says Lees. "Those of us managing large organizations will see this as the first significant development in this area in many years."

CONTROL-M's competition comes from IBM Tivoli Workload Scheduler (www .ibm.com) and CA's CA-7 and AutoSys (www.ca.com). While Tivoli Workload Scheduler and CA's products address the same functionality and automation functions, only CONTROL-M has the option to implement the functions without installing agents on each system.

The addition of agentless operation means significantly reduced administration and complexity in maintaining version releases as well as in new deployments.

uted systems. Version 6.3's agentless option adds to the system's existing agentbased technology, allowing administrators process requires administrator-level access to the target systems. This level of access poses a security concern that many administrators

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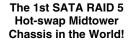
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OPINIONS

IT: Don't Do It Just Because It's Cool

A lack of business perspective on the part of IT decision makers is arguably the main reason why technology initiatives fail to deliver business value. IT projects must not be about technology but instead about creating business value through technology. IT managers who focus too much on technology can only expect minimal or even negative returns from their IT investments.

It's Pretty Cool. Let's Do It!

I recently spoke with an IT manager who proudly told me he was buying mobile devices for his CRM (customer relationship management) users to allow them to access

the system from anywhere, at anytime. When I asked why he thought this was a good idea and how he was expecting to increase revenue or enhance productivity, he seemed surprised. He was neither expecting nor realizing any returns from this investment. However, he was convinced that having a mobile workforce was a necessity in this day and age. "Users need mobile devices to access the system when they are away," he replied.

"Have you seen Siebel running on a BlackBerry? It's pretty cool."

Another IT manager I know made the decision to upgrade his character-based ERP system to the Web-based release from the vendor. The new application was designed

in a modern architecture; the forms were aesthetically nicer; and the reports were prettier. Users didn't need any software on their PCs other than a browser to access the ERP system, and they didn't have to memorize commands like they had to with the old system. Sounds pretty cool, eh?

Well, not really. The new system's functionality was pretty much the same as the old one. The application was much slower, crashed frequently, and decreased users' productivity overall. So what was the point of upgrading?

These two anecdotes, and many others that come to mind, make me realize that a

background, they love to try a new technology as soon as it becomes available. Because they are the technical gurus of the enterprise, IT managers want to look smart in front of their bosses and business colleagues. They often over-analyze the technical aspects of technology and under-analyze the business aspects. The results are solid technical implementations that are largely underused or that fail to add any significant value to the business.

Additionally, vendors, consulting companies, and even research firms are partially responsible for this. These companies often send marketing messages that

> confuse customers, create false needs, and lead IT managers into making poor technology choices. An example of this is the marketing buzz created in the last decade around ERP. This solid technology has come to have a very bad name and a high failure rate in the market. This is not because it's a bad technology, as it's widely believed to be; this is largely because vendors persuaded customers to buy much more functionality and features than they real-

ly needed. The result was poor returns and dissatisfied customers.

The business units have a piece of responsibility in this issue as well. IT managers often face the situation of having their business counterparts pushing for certain technology that they heard is good. Examples I have seen are:

- Executives asking for a CRM solution without a clear sales and marketing
- · Managers requesting BlackBerrys with access to enterprise applications just for the sake of having it.
- Employees complaining because the enterprise doesn't have the latest version of Microsoft Office.
- With all this pressure, IT managers often feel obligated to make technology investments that are not really required.

So What?

It's obvious that IT managers must develop business and soft skills to be in a better position to understand their enterprises' business needs and make good technology decisions. This is hugely important, but I won't go deeper into this topic as there are already many articles and resources that discuss this in detail.

Instead, I want to give IT managers one simple piece of advice. When facing a technology decision, put your business hat on and ask yourself the following simple questions: So what? What is the bottom line of this technology? Are we going to sell more because of this project? Are we saving money? Are we improving customer satisfaction? Or is this just another technology toy?

If you or your business stakeholders don't have concrete answers for these questions, just cancel the initiative. Otherwise, you are condemned to fail.

> Send your comments to infotech@processor.com

MAURICIO RODRIGUEZ

Mauricio Rodriguez is a senior research analyst at Info-Tech Research Group. With more $\stackrel{\frown}{\checkmark}$ than 10 years of IT industry experience, he specializes in enterprise applications, project management, and software development. Rodriguez has an MBA from York University, a Master's Certificate in Project Management from George Washington University, Project Manager Professional certification, and a Computer Science & Systems Engineering degree from Andes University.



large percentage of IT managers still make technology decisions for the wrong reasons.

Who's To Blame?

IT managers are largely responsible for this problem. Because of their technical

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August 11, 2006



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OPINIONS

RESELLER • NEWS & VIEWS

The History Of The Secondary & Reseller Market (Part II)

In my last column (Sept. 8) I spoke about the genesis of the technology reseller market, starting with the resale of NCR equipment in the 1940s. The column left off in 1956 with IBM facing a dilemma. The U.S. Department of Justice had forced IBM to offer its equipment for sale and maintain and support its used equipment. Dealers were springing up everywhere, buying used IBM equipment directly from end users. Why buy a new IBM machine when you could get older, still-productive hardware, along with IBM support, at half price?

Redefining Obsolescence

IBM's answer was to raise its maintenance rates in an effort to make it too expensive for end users to continue to maintain used IBM hardware. IBM thought it could define obsolescence with a new formula. Obsolescence equals the cost to purchase a used IBM system minus the cost of maintaining it.

Not much has changed with today's manufacturers, which try to obsolete equipment by making the cost that second users must pay for the operating system plus the used hardware more expensive than buying a new model. That approach still doesn't work.

Enter Third-Party Maintainers

The more IBM raised its maintenance rates, the bigger the third-party maintenance industry grew. Dealers began to sell used IBM machines and place them under maintenance with anyone but IBM. Maintenance

companies sprung up overnight. After all, IBM was required to sell parts, even to companies that were competing with IBM for maintenance.

To cut costs, IBM decided to find a cheap-

er way to sell its hardware, so it laid off many of its sales people in the 1980s and started a Business Partner program, giving Business Partners the task of selling the new System/36, a follow-up product to its Systems/32, /34, and /38 lines.

Blue Turns Grey

By this time, much of the IBM legacy hardware was no longer owned by IBM and under third-party maintenance. Only the secondary market dealers knew where this used hardware was, and those dealers became IBM's biggest Business Partners.

The business partners were supposed to add value (software) to the IBM systems with each sale, but that rarely happened. They simply went back to old customers and upgraded them to the latest units. And to add fuel to the fire, these Business Partners (the biggest of which was Jacor out of Atlanta) sold their new equipment to anyone they could, including other resellers. And thus, the grey market in IBM equipment was born.

Today, many manufacturers pay lip service to the fact that a grey market exists for

their hardware. Truth is they are just glad to see some boxes sold, and they really don't care who is doing the selling or buying.

But IBM laid down the law. It put in place a Compliance Group to enforce adherence to the IBM Business Partner Agreement. IBM would physically visit its larger Business Partners, audit their sales records, and even call their customers, all in an attempt to enforce compliance. And if IBM found a violation, it would cancel its

A funny thing also happened while "fixing" the secondary market problems. Used IBM hardware had (and still has) a higher residual value than others. This higher value translates into more sales of new equipment for IBM because when customers get more money when they sell their used hardware, they have more money to spend. To this day, IBM generates a ton of revenue by providing software and service on its legacy equipment. IBM turned its problems into a triple win for

IBM, the secondary market dealers, and the end users.

JOSEPH MARION Separation for the past 30 years Joseph Marion has dealers, and the end users. History Has A Lot To Say

For the past 30 years Joseph Marion has worked in the technology equipment reseller market. In the 1970s he competed with the major equipment manufacturers by selling, leasing, exporting, and maintaining used equipment. In the 1980s he "crossed over," joining forces with IBM and becoming one of its most successful authorized business partners. Since 1990 Marion has headed up the Association of Service and Computer Dealers International, the world's largest association of companies that deal in technology products.



The lesson for today's manufacturers is clear. You can create a strategy that harnesses the power of the secondary market reseller in order to

increase your services business and complement the sale of new hardware, or you can fight it. Fight it, and no one wins. Embrace it and view it as a service to your end users, and everyone can win.

End users have a role, too. Manufacturers have spent a lot of money on getting laws in place to protect their intellectual property rights. They are misusing those laws to restrict the free flow of secondary hardware. Without the secondary market and third-party maintenance industry, your

options quickly become limited.

Thanks, *Processor* and my readers. See you all at www.ascdi.com, the home of the secondary market and reseller community.

Send your comments to ascdi@processor.com

Business Partner contract, regardless of the size of the dealer.

An Organized Secondary Market

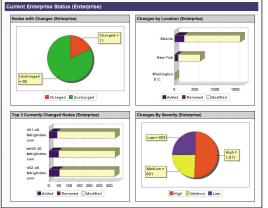
IBM also put some controls into the secondary market of IBM equipment by forming Industry Relations, which made sure that secondary market dealers followed IBM procedures. In exchange, dealers were assured that IBM would maintain used equipment anywhere. And because of the increased competition from third-party maintainers, the services were done at a competitive rate.

NETWORK & SYSTEMS MGMT.

August 11, 2006

Now You Can Detect All Changes To Database Structures With Tripwire Enterprise

Provides Increased Visibility So You Can Quickly Reconcile Changes



TRIPWIRE ENTERPRISE/DB for databases is the new Tripwire Enterprise component that monitors and detects all changes to database structures. Increased visibility into database structure change enables staff to quickly reconcile changes with authorized work orders and focus remediation efforts on undesired changes. The Enterprise/DB component identifies what changed, who made the change, when, and how the change was made.

Change is the most significant threat to an enterprise's compliance status, security posture, and ability to deliver high-quality IT services. Just as a chain is only as strong as its weakest link, an IT service stack is only as controlled as its least controlled component. Tripwire Enterprise independently audits changes across the entire IT service stack—servers, desktops, middleware, directory services, network devices, and now, databases.

The various components work together, ensuring all changes are auditable by providing a trusted and verifiable audit trail of all system changes. This helps to reduce unplanned work, provides auditable data to simplify IT audit preparation, and supports services quality and security initiatives.

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Provides a single point of management control for ensuring all changes are auditable and authorized

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TRIPWIRE

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August 11, 2006

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Industry Statistics

- More than 57% of all network breaches are made from laptops. (FBI)
- 97% of stolen computers are never recovered. (FBI)
- 1 out of 10 laptops will be stolen or lost each year. (Gartner Group)
- 32 States have passed the Security Breach Notification Law, which only applies to unencrypted information.
- More than 32 million Americans have had sensitive personal data exposed during the

past seven months and nearly 90 million since the ChoicePoint incident last year.

- 20% of customers who received a breach notification terminated the relationship due to lack of trust. (Ponemon Study)
- \$14 million—average cost per company with a data breach. (Ponemon)

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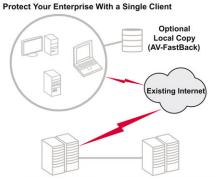
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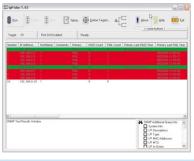
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Mac Ports	1		ethernetCimacd	1 59	100 Mbps	FDv	00.00 F1 6F 6D 00.20 E0.22 81	192,168.0.	7
Step Setup	2	2	ethernelCimacd	1 Date	10 Mbps	FDx			
200	3	3	ethernetCsmacd	1 100	100 Mbps	FDx	00.14.38.97.CB		
initch Hostnane/IP Address	4	4	ethernetConacd	1 District	10 Mbps	FDx	N		
192,168,1,222 •	5	5	ethernetCunacd		10 Hbps		Pages-dick on	and for more o	oftens
lead Community Name	6	6	ethernetCimacd	1 Done	10 Mbps	FDx	Lokamon	*********	-
nále v	7	7	ethernelCimacd	1 59	100 Hbps	FDx	00.0F.1F.54.95:		
		0	ethernetCunacd	1 Date	10 Mbps				
Write Connunity Name	9	9	ethernelCimacd	1 Done	10 Mbps	FDx			
Smary Server Router	10	10	eherrelCimocd		100 Hbps		00.0F1F38:54		
Sortname/IP Address	11	11	eherrelCmacd		10 Mbps	FDx			
	12	12	ethernetConscd	1 Done	10 Mbps	FDv			
conmunity Name for above	13	13	ethernelCimacd	1 59	100 Mbps	FDv			
*	14	14	ethernetCanacd		10 Mbps				
ieronday Series Router	15	15	ethernelCsmacd	1 10	100 Hbps	FDx	00:02835A.DC	192,168.0	DebP.dor
fostname/IP Address	16	16	eheneCmacd		100 Mbps		00.13.72.76.2F	192,168.0.	DEVCOM
	17	17	ethemelCsmacd		10 Hbps				
comunity Name for above	18	18	ethernetCsmacd	1 Done	10 Mbps	FDx			
*	19	19	eherrelCinacd		10 Mbps				
	20	20	eherrelCmacd		10 Mbps				
Query Switch Arp Table	21	21	ethernetCimacd	1 Done	10 Mbps	FDx			
Query Local Asp Table	22	22	ethernelCsmacd	1 Door	10 Hbps	FDv			
Resolve IPs to Hostnames	23	23	ethernelCanacd		10 Hbps				
	24	24	ethernetCimacd	1 Down	10 Mbos	FDv			

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Bite The Bullet & Study For The Security+ Exam

Thomson's Guide Is More Than Just A "Good-Enough" Study Aid

by Bruce Gain

THE IT CERTIFICATION PAPER chase draws IT neophytes and senior admins alike, even for the most basic first exams. A recent college grad might seek to meet the minimum requirement of his first job. A pencil pusher in a bureaucratic Fortune 500 firm might want to overzealously cover all Sarbanes-Oxley requirements by mandating specific certificates for network security clearance, even for a seasoned IT pro with a master's

Thomson's CompTIA's Security+ study guide

alleviates some of the pain that often comes

with preparing for IT certification exams by

offering a guide that is very well-written and

straightforward. The information and skills

you must master for the Security+ exam are

accessible and clearly communicated. The

book also comes with CDs for interactive

study and test preparation, including the

tice tests and questions.

Certblaster CD, which offers Security+ prac-

Key Concepts

in network administration who never had to bother to get Network+ certified.

Security+, of course, is one of the core starting certifications in the IT field. While it represents new opportunities for entry-level admins, the exam is also often a bothersome requirement for veterans, who are required to have the paper requirement. For either scenario, Thomson's preparation guide for the CompTIA's Security+ certification exam is a good way to get your Security+ certification with a minimal amount of pain.

Preparation A La Thomson

There are, of course, good IT study guides—and many bad ones. Technology manuals, like any technology textbooks for subject areas ranging from Computer Science 101 to Advanced Calculus 500, are too often written by underpaid academics or consultants who lack communication skills and hate writing. Instead, Thomson's CompTIA's Security+ study guide offers clear and concise text and diagrams that are also well-communicated and polished. Instead of wasting your time and money just figuring out what the author is trying to say, Thomson's CompTIA's Security+ study guide clearly spells out and explains what you need to learn.

Thomson's CompTIA's Security+ study guide offers 17 chapters that scan the gamut of the exam's subjects, ranging from an overview of security to network forensics. The book also comes with three CDs

Thomson's Preparation For The CompTIA Security+ Certification Exam

Technical Editor: Jorge Gardos

Publisher: Thomson Price: \$231

Format: Paperback, 17 chapters plus appendix and index

for interactive study and test preparation. Besides exercises to drill down on what you study in the book, the CertBlaster CD offers Security+ simulation test exams that give you a better feel for what you will face. The book also has a reasonably comprehensive index at the end.

The Newbie vs. The Veteran

Ironically, the seasoned IT professional could find this study guide to be more of a challenge to master than the first-year admin. For example, you may have years of experience configuring and managing an enterprise's intrusion detection system and feel that it is a waste of time to memorize everything in the Attacks and Malicious Code chapter in which "logic bombs" or "birthday attacks" are described. You may know what these attacks are in practice and probably have succeeded in thwarting them. But do you have instant recall about whether a Ping of Death attack uses IP packet fragmentation or that a Smurf attack involves ICMP packets? This is the type of detailed information the guide offers and, more importantly, what you will likely see on the exam.

Conversely, the entry-level IT admin who may or may not have a couple of years of experience in the field already may desire more information about certain subjects beyond what the guide offers. How IDS devices work and are administered is sufficiently explained to answer exam questions, but a set of Web links and recommended reading about the subject would have been welcome.

What You Need To Know

CompTIA's Security+ study guide may offer too much information for the IT expert who just needs the Security+ certificate for his credentials. It will also not serve as a replacement for a comprehensive networking security course at a four-year university for those hungry for in-depth knowledge about the field. However, the guide will serve those well who seek a thorough, clearly communicated guide with an abundance of exercises and CD simulation tests and questions for those who need an efficient method to self-study for Security+ certification.

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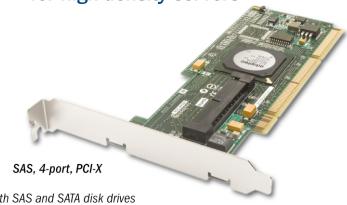
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Racks & KVMs

Choosing What's Right

by Sandra Kay Miller

WISELY UTILIZING FLOOR SPACE in the data center led to the development of electronic system racks and, in turn, KVM equipment. Working along the same lines as designing real estate in a confined area, computer systems are now routinely housed in tower racks similar to the modern city's skyscrapers.

Early racks accommodated standard computer boxes, but as computing needs grew, the systems morphed into specialized rack-mounted systems inserted horizontally one on top of the other to house not only computer systems but also monitors, KVMs, and networking equipment, as well as other standardized electronic equipment. Racks were divided into standard units (one rack unit is 19 inches wide and 1.75 inches tall), creating another uniform measurement for data center planning and computer equipment manufacturing.

The initial challenge of where to put interface peripherals—keyboards, video displays, and mice—resulted in the introduction of KVM solutions. The first KVM switches were analog, allowing users to plug multiple video, mouse, and keyboard cables into a single switch that provided access to all the systems through a single interface. As data centers expanded from tens of servers into thousands that were globally distributed, KVM capabilities

moved into the digital realm, traveling over IP networks instead of coax or CAT 5 cables connected directly between the KVM switch and the computer system.

Rack It Up

There's a rack designed to fit just about any system; however, the standard rack contains 42 to 45 units. It can be as simple as a bare-bones, two-post aluminum openframe rack or as elaborate as a product that integrates rack, power, cooling, KVM, and security.

When shopping for racks, there are a number of options to consider. The first is size and capacity. Thanks to standardization, it's fairly easy to determine how much rack space is needed; however, don't forget to take into account how the rack will physically fit into your data center's environment. Another important factor to consider is future expansion.

Racks can be freestanding or wall-mounted. There are even smaller desktop versions available. Some rack-mounted systems carry more weight than others (especially those with redundant power supplies), so make sure the rack is rated to handle the weight of the equipment. Racks themselves can also be extremely heavy. Consider whether or not the rack is going to remain stationary or if it will need to be moved regularly.

Some rack systems offer more flexibility in their configuration than others, such as sliding shelves, vertical rails, retractable trays and drawers, and cooling and UPS

systems. Other features to take into consideration are access to equipment through front and back, the ability to adjust the base for leveling, seismic bracing, wheels for easy movement, and cable management. Racks can be standalone units or hooked together. For controlling access to critical systems, racks can include a variety of security features, including solid and screened panels and cabinet door and tray locks. To keep costs down, don't purchase racks with features that will never be used. Likewise, make sure your choice delivers your particular needs, so you're not stuck purchasing additional equipment to customize the rack for your requirements.

KVM Choices

With multiple systems housed in racks, KVM switches are a must, or the data center would be quickly overrun with interface peripherals.

The first aspect to address when purchasing KVM equipment is the platform to be supported. KVMs come in an assortment of technologies, including PS/2, USB, PC, Sun, Mac, DVI, ADC, Dual Video, Serial, and others. Multiplatform KVMs are available for heterogeneous environments, as are cable converters, which can be less costly.

Analog or digital is the next big question when choosing a KVM solution. Analog systems typically support cables up to 1,000 feet (300 meters), whereas digital KVMs operate over IP and can be utilized throughout a global network. Recently introduced in the last few years have been wireless KVM solutions; however, these devices only extend KVM capabilities to about 100 feet, depending on the environment.

After answering that question, determine if the KVM needs to support a single user or multiple users. Analog, single-user switches are geared toward smaller installations letting a single user access multiple systems from a single console. Multiple-user KVMs come in both analog and digital varieties. With the analog solution, cables are the limiting factor, whereas with an IP-based KVM solution, servers can be controlled via the network from anywhere in the world.

For large installations, check to see if individual KVMs can be connected to each other for expansion and if they can be mounted inside equipment racks. For smaller deployments, a desktop model placed on top of a rack component might suffice. When environments are prohibitive to wired installations, wireless KVMs are also available.

Blade Runner

Blade servers have further whittled down system footprints within the data center, which has resulted in radical changes in how servers are housed. These servers have had most of the support components stripped out of them (power, cooling, interconnects, management) for space considerations, leaving the bare necessities for computing (drive bays, CPU, memory). "Blades are very different from normal servers," says Philippe D'Argent, vice president of sales for EMEA at Avocent, a leading manufacturer of KVM solutions.

Racks for blade servers bring about a number of added dimensions to consider when making a purchasing decision. Designed for high density, blade racks incorporate services such as power, cooling, networking, management, and assorted interconnects due to the fact that most of this functionality has been stripped from the server blade itself. No longer limited to a 42U form-factor, blade racks can now house up to 100 servers.

Blade server and KVM manufacturers have teamed up to create efficient designs by integrating a KVM switch right onto the blade chassis, which allows the blade to plug into the data center's existing KVM infrastructure.

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i-Tech Company NetView KVM Switch Solutions

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Rackmount Solutions

We offer many data center products, including air-conditioned rack units www.Processor.com/RackmountSolutions25

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Rose Electronics

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Tripp Lite 32-Port 1U Rackmount KVM Switch

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If your KVM will be deployed in a secured posture, both analog and digital versions offer an array of security features from physical locks to encrypted channels with password protection.

Where To Find KVM & Rack Products

Vendor/URL	Products
ATEN www.aten.com	Extensive line of KVM equipment, including wireless solutions
Avocent www.avocent.com	Provides an assortment of KVM solutions, including KVM for desktops, secured, and broadcasting environments and analog KVM
Rackmount Solutions www.rackmountsolutions.net	An extensive rack selection, including KVM switches, cables, and accessories
Raritan www.raritan.com	Offers numerous analog and digital KVM products
Recortec www.recortec.com	Manufacturer of KVM solutions and both stock and custom rack-mountable system enclosures
Rose Electronics www.rose.com	Offers both traditional and digital IP KVM along with KVM switches, extenders, converters, and rack drawers
Tripp Lite www.tripplite.com	Sells a full line of both racks and KVM solutions



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The Evolution Of Broadband

Broadband Over Power Lines Takes Another Step Forward

by Paul Ferrill Jr.

BROADBAND OVER POWER LINES, or BPL, took one step closer to reality with a recent Memorandum Opinion And Order from the FCC (Federal Communications Commission). But while clearance has been given for operators to offer services, don't expect to be able to plug into your wall socket and get Internet service any time soon. FCC-approved commercial equipment is just now beginning to

Amateur radio could potentially experience the most interference due to the unshielded wires used to transmit power over long distances.

become available, so it will be a while before any large-scale deployments roll out.

Several energy companies plan on implementing BPL to improve their overall service reliability. According to Tom Shiel, spokesperson for Duke Energy, "Duke Energy will be using BPL to make our electrical distribution more efficient and reliable through better monitoring down to

the transformer level. We expect to take advantage of the two-way communication the smart grid will provide by implementing other applications as we go forward."

Duke Energy has also been part of several Internet trials around southern Charlotte, N.C. The first test in 2004 involved 500 to 700 homes, while a more recent trial includes up to 6,000 homes using equipment provided by BPL design, development, and marketing firm Ambient (www.ambientcorp.com). This test will help demonstrate the scalability of the technology while measuring reliability.

The Other Side

One of the biggest concerns about BPL is the potential interference with some forms of communication. Amateur radio could potentially experience the most interference due to the unshielded wires used to transmit power over long distances. Because of this, the Amateur Radio Relay League was one of the most vocal opponents to approval of the technology during the FCC's comment period before issuing the memorandum.

FCC part 15 regulates unlicensed RF devices and will be the specific controlling document with respect to each BPL deployment. The biggest concern of the amateur radio operators is that this won't be enforced to the level necessary to prevent disruption of their communications.

Moving Forward

The United Power Line Council is an organization with the stated goal of "driving the

development of broadband over power line solutions for electric utilities and their partners." A recently released UTC (United Telecom Council) study titled "Opportunities for Electric Utilities: Broadband over Power Line" listed a number of factors pertinent to BPL and its deployment:

- Smart grid automation and intelligent grid projects will help to demonstrate the viability and usefulness of BPL
- BPL use for in-building networks will increase
- BPL for home networking of communications, computing, and entertainment systems will become available
- BPL as a solution for rural Internet access

Several vendors are providing BPL equipment for testing and early deployment.

CURRENT Communications Group (www.currentgroup.com) has received a number of investments during the past

year. It has partnered with several energy

companies in early demonstration efforts, including TXU Electric Delivery in the Dallas-Fort Worth area and Duke Energy (formerly Cinergy) in Cincinnati.

Ambient has participated in a number of demonstrations in partnership with Consolidated Edison in New York and Duke Energy in Charlotte. In September, Ambient received a grant of BPL Equipment Authorization from the FCC for its second-generation communication node, also called the X^2 . This approval allows Ambient to market and install its latest equipment to commercial customers.

With FCC approval should come more real deployments. As the equipment makes its way to the field, the questions of scalability and reliability should be answered. Power companies will be the biggest initial users, as they strive to cut costs and improve their services. Right behind them should be some of the other services mentioned in the UTC study.

Companies Offering Broadband Over Power Lines

Company	URL	Available Products
Ambient	www.ambientcorp.com	Smart grid; BPL (broadband over power lines)
Arkados	www.arkados.com	Whole house connectivity
BPL Global	www.bplglobal.net	Smart grid; BPL
CURRENT Communications Group	www.currentgroup.com	Smart grid; BPL
Telkonet	www.telkonet.com	Multidwelling BPL

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WHAT'S HAPPENING

Keeping It Simple

HP Makes Its Mark In The SME Market

by Kurt Marko

MENTION HP PRODUCTS, and most people immediately think of their seemingly omnipresent printers, and while undoubtedly HP's imaging and printing business is still the most profitable part of the company, its network equipment unit has quietly been making a name for itself as both a technology innovator and trusted brand for enterprise and SME customers. HP has a long history in network hardware dating back to the mid-1980s. It invented the stacking hub in 1990, christening the AdvanceStack product line, and throughout the '90s expanded its scope beyond the managed layer 2 switch market eventually spawning the ProCurve brand in 1998 to reflect this more comprehensive set of products. Although it may seem like it is playing Avis to Cisco's Hertz, HP is no copycat; ProCurve sales representative Paul Sorge says HP holds numerous patents on fundamental networking technology, including that for data over twisted pair cablingcritical to virtually all Ethernet switches.

Product Strategy

According to Sorge, HP is focused "on standards-based Ethernet LANs for the mainstream enterprise customer," and while its products can scale from small remote offices or SMEs to global corporations, HP doesn't address the consumer, telco, or ISP market. As Sorge puts it, one of HP's fundamental goals is "to take the complexity out of network management." It is always looking for ways to make the installation and configuration of its products simpler—an especially appealing quality for overworked and understaffed SME IT groups. The flip side to making things easier to use is HP's strategy to move network intelligence, and the powerful features it enables, from the core to the edge, using its Adaptive EDGE Architecture.

Contrasted with competitors' schemes where control and policy are set with complex, intelligent devices at the network core, HP's approach aims to keep "command" of the network centralized but to "push out control—and intelligence—to the network edge where users connect." Thus, the edge switch becomes intelligent enough to know what kind of device is connecting to the network, set policy, and allocate resources, including assigning attaching devices to specific VLANs, allocating bandwidth quotas, setting QoS and flow control, and assigning network access control and security policy. All of this happens dynamically based on the user and device connecting. "The idea of statically configuring a port is out the window," Sorge says. He cites a university as a prototypical network requiring different network settings for various user groups.

Product Lines & New Products

The ProCurve line consists of four primary product segments: core switch routers, aggregating switches, edge switches, and wireless. The 9300m and 9400sl core switches function similarly to traditional layer 3 and 4 routers and are designed to form the backbone of a large enterprise or campus LAN.

ProCurve's bread and butter is its extensive line of edge switches, ranging from the 8- to 24-port Fast Ethernet/GbE 1800 series to the modular 5400 series sporting up to 48 10GbE or 288 10/100/1000 ports. The 3500 and 5400 edge switches and 6200 distribution aggregator switch feature HP's fourthgeneration ProVision ASIC network chipset that offers wirespeed switching and packet

Lifehacks For Data Center Managers

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inspection, allowing application of sophisticated policy and network control parameters to any port without performance degradation.

HP's Sorge notes that the new 1800, 2510, and 2810 lines are targeted at the SME or remote site markets, incorporating a simple Web-based management interface and a compact, fanless design to improve reliability. These low-end products don't support 10GbE uplinks, so buyers needing highspeed bandwidth aggregation have to migrate to the midrange 3400 series or higher.

In the wireless arena, HP has a number of new products based on so-called thin access points (HP calls them Radio Ports)—which



essentially only broadcast RF and look to a switch for policy—and intelligent wireless modules for their edge switches. Sorge says one of HP's goals is a "unified user experience-with wireless speeds increasing, we are trying to make the user experience the same whether they are wired or wireless." One of the key new products supporting this strategy is the 5300 Wireless Edge Services xl Module that works in conjunction with its 210, 220, or 230 radio ports, providing the same ability to set network parameterswhether access controls, VLAN assignments, or rate limits—as with wired networks.

Controlling all that switch intelligence is the job of the ProCurve Manager and IDM (Identity Driven Manager). ProCurve Manager, included with every switch, provides basic device management, statistics, and network discovery—add-ons include a Plus version and the Mobility Manager plug-in that provide consolidated management

across all wired and wireless devices on the network. IDM facilitates setting network policy and in the 2.0 version can now import an MS Active Directory or other LDAP database to define user-based access control lists. Sorge calls IDM a "policybased manager with dynamic assignment"—because the policy is set for an AD group, any users added to groups on the global directory automatically inherit the network policy of their peers.

Future Directions

An emerging technology HP is particularly keen on is that to provide "trusted access" to networks, also known as NAC (network access or admission control), or what Microsoft calls Network Access Protection. The common goal is to ensure that network clients meet some minimal set of baseline security policies—antivirus signatures, OS security patch levels, antispyware protection, etc.—prior to their gaining unfettered network access. Clients failing the security scan are typically placed in a restricted quarantine network until they can apply the required software fixes. HP is working under the auspices of the Trusted Network Connect working group to ensure interoperability between security components from different vendors.

Another highly publicized security technology from HP Labs has made its way into the ProCurve lineup. Known as virus throttling or connection-rate filtering, the software built into the 3500, 5300, and 5400 series switches detects "abnormal, virus-like behavior, and slowing down the number of different connections the infected machine can make until an administrator can determine if they are viral in nature and take further action," according to the HP Web site.

HP's Sorge touts the ProCurve line, saying its scalable, intelligent switches come at half the cost of its major competitor, Cisco, while offering a full lifetime, next-day replacement warranty. These selling points must be working because the Dell'Oro Group currently ranks HP ProCurve No. 3 in worldwide Ethernet switch revenue.

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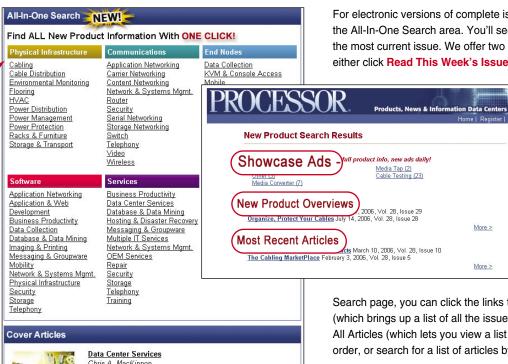


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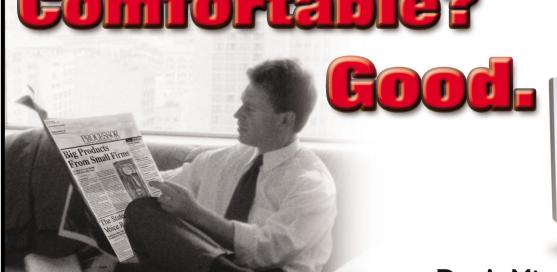
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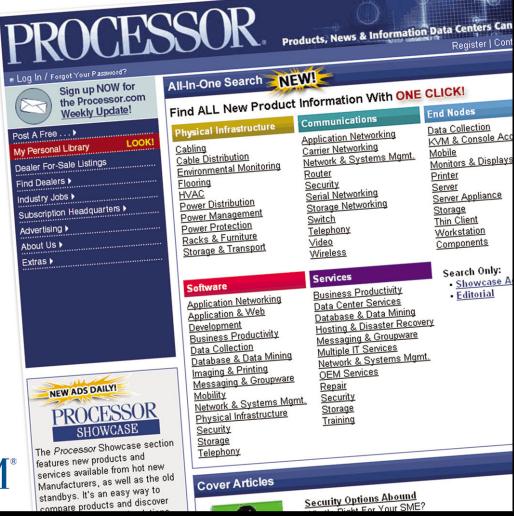
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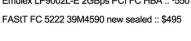
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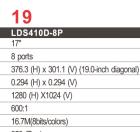


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33 Watts	33 Watts	38 Watts
AC 100-240V Universal	AC 100-240V Universal	AC 100-240V Universal
OSD Hot Key	OSD Hot Key	OSD Hot Key
0°C~50°C in operating;	0°C~50°C in operating;	0°C~50°C in operating;
-20°C ~60°C in storage	-20°C ~60°C in storage	-20°C~60°C in storage

16.2M(6bits+FRC)	16.7M(8bits/colors)
250 (Typ.)	280 (Typ.)
RGB Analog	RGB Analog
- 65°~ 65°,- 55°~ 65°	-70° ~ 70°,- 60° ~ 60°
Power: 12DV adapter	Power: 12DV adapter
Keyboard: PS/2	Keyboard: PS/2
Mouse: PS/2	Mouse: PS/2
VGA: 15-pin D-Sub	VGA: 15-pin D-Sub
88-key keyboard and integrated Touch Pad	88-key keyboard and integrated Touch Pad
17-key numerical key pad	17-key numerical key pad
33 Watts	38 Watts
33 Watts AC 100-240V Universal	38 Watts AC 100-240V Universal
AC 100-240V Universal	AC 100-240V Universal
AC 100-240V Universal OSD Hot Key	AC 100-240V Universal OSD Hot Key
AC 100-240V Universal OSD Hot Key 0°C ~50°C in operating;	AC 100-240V Universal OSD Hot Key 0°C ~50°C in operating;

515mm (D) x484mm (W) x44mm (H)

1280 (H) X1024 (V)	128
400:1	600
16.7M(8bits/colors)	16.
280 (Typ.)	250
RGB Analog	4 re
- 70° ~ 70°,- 60° ~ 60°	- 8
Power: 12DV adapter	Pov
Keyboard: PS/2	Key
Mouse: PS/2	Mo
VGA: 15-pin D-Sub	VG
88-key keyboard and integrated Touch Pad	88-
17-key numerical key pad	17-
38 Watts	44
AC 100-240V Universal	AC
OSD Hot Key	OS
0°C~50°C in operating;	0℃
-20°C~60°C in storage	-20
10~85% in operating; 10-90% in storage	10-
515mm (D) x484mm (W) x44mm (H)	515

0.294 (H) x 0.294 (V)
1280 (H) X1024 (V)
600:1
16.7M(8bits/colors)
250 (Typ.)
4 replaceable CCFLs edge-light(top/Bottom)
- 85°~ 85°,- 85°~ 85°
Power: 12DV adapter
Keyboard: PS/2
Mouse: PS/2
VGA: 15-pin D-Sub
88-key keyboard and integrated Touch Pad
17-key numerical key pad
44 Watts
AC 100-240V Universal
OSD Hot Key
0°C~50°C in operating;
-20°C~60°C in storage
10~85% in operating; 10-90% in storage
515mm (D) x484mm (W) x44mm (H)

	0.294 (H) X 0.294 (V)
	1280 (H) X1024 (V)
	600:1
	16.7M(8bits/colors)
	250 (Typ.)
ittom)	4 replaceable CCFLs edge-light(top/Bottom)
	- 85°~ 85°,- 85°~ 85°
	Power: 12DV adapter
	Keyboard: PS/2
	Mouse: PS/2
	VGA: 15-pin D-Sub
Pad	88-key keyboard and integrated Touch Pad
	17-key numerical key pad
	44 Watts
	AC 100-240V Universal
	OSD Hot Key
	0°C~50°C in operating;
	-20°C~60°C in storage
ge	10~85% in operating; 10-90% in storage

515mm (D) x484mm (W) x44mm (H)







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